

EXECUTIVE SUMMARY

RESPONSE TO NTIA-RUS BROADBAND TECHNOLOGY OPPORTUNITIES PROGRAM (BTOP) INITIATIVES

[Docket No. 090309298-9299-01]

The United States ranks a dismal 17th in the World in “true” Broadband deployments and services. Most of this can be attributed to ousted FCC Chair Kevin Martin and past White House administrations. It is quite clear that Communities, Municipalities, Cities and Counties within the United States have desired their own broadband wireless infrastructures for their Citizenry, Businesses, Tourists, Local Governments, School Systems, Health Care Providers, Public Safety, First Responders and Low-Income Households, serving their Urban, Suburban *and* Rural Geographical Service Areas (GSA’s), since broadband Wi-Fi (802.11n) became tried and true in the marketplace.

This summary takes into account the abstract provided by the ARRA/NTIA/RUS and the issues presented during the BTOP public meetings and introduces unique and differentiating technologies, development, deployment and operating models to bridge the divide in lacks of performance in this marketplace. The analysis will offer the NTIA, RUS (and the FCC) alternatives to fully exploit the synergies available between newer state-of-the-art broadband wireless technologies, the new American Recovery and Reinvestment Act (**ARRA**, a.k.a Economic Stimulus Package), the Broadband Technology Opportunities Program (BTOP) and the formation of local Public/Private partnerships to forge the many opportunities that now present to empower our Communities, Municipalities, Cities and Counties to finally realize and fulfill upon mission critical broadband wireless infrastructures.

New broadband wireless technologies will allow them to build towards developing and deploying extremely cost-effective broadband wireless networks and systems that will help them define their own broadband futures in all Urban, Suburban, *and* Rural markets within the United States.

The intent of this summary is to present ideas that will introduce creative solutions to benefit all Americans and Businesses and prevent Federal Government Officials, the FCC and the NTIA/RUS from following the flawed bureaucratic processes of the past and to capture as much “(broadband) bang-for-the- (taxpayer) buck” from BTOP as possible.

Submitted by:

Brad Bowman • Program Director • AccessDelray.org • 561.252.4764
<http://www.AccessDelray.org> • bbowman@accessdelray.org

This creative, forward thinking approach towards implementing successful and sustainable technology and operating models in the new US broadband wireless arena is only compounded by the fact that it will not only introduce newer broadband wireless technology and infrastructures to Urban, Suburban **and** Rural markets but will relieve much of the onus that will be exacted upon Federal and State Departmental Officials and the NTIA/RUS to coordinate and implement sustainable and transparent BTOP programs.

As there is a total of \$7.2 Billion available for BTOP through the American Recovery and Reinvestment Act (ARRA) of 2009, institutional and private sector monies must also be solicited to fortify flailing credit markets. The technology sector can help to accommodate this need as this is one market segment that will continue to thrive and help the United States and the World to recover from the current economic downturn.

Large private sector financial institutions and financial advisors have already expressed interest in migrating from traditional investment vehicles to specifically bolster investment in newer broadband infrastructures by providing matching funds that will conceivably bring available funds to \$14.4 Billion to allocate for all Urban, Suburban **and** Rural markets.

It is also important to realize that BTOP program monies are going to improve upon the many programs that will be introduced by ARRA as a whole (outside of BTOP). Broadband wireless infrastructures will directly affect the success and sustainability of these ARRA programs.

We have reached an initiatory pinnacle as far as technology, vehicles and instruments to deliver broadband communications and services and it comes down to proper wireless spectrum allocation, availability and usage, satellite services, and ongoing improvement in technology using these assets. The fact that we no longer need hard line or hard wired Telecom or Cable Company incumbents to deliver these services is a blessing in disguise to Communities, Municipalities, Cities and Counties in all Urban, Suburban, **and** Rural markets within the United States.

Large incumbents, such as Verizon, AT&T, Sprint, Clearwire, Comcast, Time Warner, etc., have been lobbying and strategizing to monopolize these new wireless spectrums and markets. There is absolutely no room for these large

Submitted by:

Brad Bowman • Program Director • AccessDelray.org • 561.252.4764
<http://www.AccessDelray.org> • bbowman@accessdelray.org

incumbents, acting as middle men, to offer the **core** broadband communications and wireless infrastructures to our Communities, Municipalities, Cities and Counties and compete to pull every dollar possible from these cash-starved entities.

We will look to large incumbents to provide enhanced services through **their** new wireless networks (and we will want those enhanced services). It is important however that Communities, Municipalities, Cities and Counties implement the technology and spectrum available to build out their own broadband wireless infrastructures for **their** Urban, Suburban **and** Rural markets (their asset), generate revenue from those infrastructures, and build towards their own broadband futures.

So many markets in the USA only provide two choices for broadband... cable or DSL from large incumbents or resellers of large incumbent services. These incumbents are now flailing to maintain their customer base and most Americans need to know that service levels and speeds are only as good as the copper (cable or phone line) that is coming into their homes or business.

It is time Americans had a choice. A choice between large incumbents and local wireless broadband service providers; a choice between supporting our local economy by using these local providers and opting to receive enhanced services from large incumbents; a choice between building a self sustaining community or one monopolized by greedy, large incumbents. With the “change” that President Obama is promising there must also be the choices that all Americans can make to implement that change and improve their quality of life.

This summary will address all of these aforementioned issues, along with explaining and defining the roles (both past and future) of large Telecom and Cable incumbents, Private Sector investment, and help to establish new standards and overall fundamental improvements to existing broadband initiatives that will act as a catalyst to jumpstart a quick and sensible path to broadband excellence within the United States.

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REQUEST FOR INFORMATION – BROADBAND TECHNOLOGY OPPORTUNITIES PROGRAM (BTOP)

PREAMBLE

(This information is included for readers who have not read Docket No.
090309298-9299-01 – Request for Information – BTOP)

RESPONSE TO DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

RESPONSE TO DEPARTMENT OF AGRICULTURE

Rural Utilities Service

[Response to Docket No. 090309298-9299-01]

Response to American Recovery and Reinvestment Act of 2009 Broadband
Initiatives

AGENCIES: National Telecommunications and Information Administration,
U.S. Department of Commerce; Rural Utilities Service, U.S. Department
of Agriculture

ACTION: Agencies joint request for information.

SUMMARY: Section 6001 of the American Recovery and Reinvestment Act of 2009 (Recovery Act) requires the National Telecommunications and Information Administration (NTIA) to establish the Broadband Technology Opportunities Program (BTOP). The Recovery Act further establishes authority for the Rural Utilities Service (RUS) to make grants and loans for the deployment and construction of broadband systems. NTIA and RUS will hold a series of public meetings about the new programs beginning on March 16, 2009. In addition to the information received about the new programs during the public meetings, written comments will be accepted through April 13, 2009. Through this notice, guidance is provided as to the matters to be discussed at these public meetings

and the categories of information with respect to which interested parties may submit comments.

MEETING DATES: There will be a series of public meetings in Washington, DC on March 16, 19, 23 and 24, 2009. Field hearings will be held in other locations on March 17 and 18, 2009. These times and the agenda topics are subject to change. Please refer to NTIA's Web site, <http://www.ntia.doc.gov/broadbandgrants> or the RUS Web site <http://www.rurdev.usda.gov/index.html>, for the most up-to-date meeting agenda. Additional meetings may be announced in the future. Comments will be received through April 13, 2009.

Time and Place: The meetings on March 16, 19, 23, and 24, 2009 will begin at 10 a.m. and will take place at the U.S. Department of Commerce, 1401 Constitution Avenue, NW., Washington, DC 20230. The meetings on March 17 and 18, 2009, will be field hearings. The location and time of the field hearings on March 17 and 18 will be announced on <http://www.ntia.doc.gov/broadbandgrants> and on <http://www.rurdev.usda.gov/index.html>. Webcast and/or transcripts of all of the public meetings will be made available on NTIA's Web site.

Times and locations are subject to change. Any changes will be announced on the NTIA Web site <http://www.ntia.doc.gov/broadbandgrants> or the RUS Web site <http://www.rurdev.usda.gov/index.html>.

FOR FURTHER INFORMATION: For further information regarding the meetings, contact Barbara Brown at (202) 482-4374 or

bbrown@ntia.doc.gov; Mary Campanola, USDA at (202) 720-8822 or mary.campanola@usda.gov.

SUPPLEMENTARY INFORMATION: Section 6001 of the American Recovery and Reinvestment Act of 2009 (Recovery Act) requires the National Telecommunications and Information Administration (NTIA), in consultation with the Federal Communications Commission (FCC), to establish the Broadband Technology Opportunities Program (BTOP). The purposes of the BTOP include accelerating broadband deployment in

unserved and underserved areas and ensuring that strategic institutions that are likely to create jobs or provide significant public benefits have broadband connections.

The Recovery Act also establishes authority for the RUS to make grants and loans for the deployment and construction of broadband systems. The purpose of the additional RUS broadband authority is to improve access to broadband areas without service or that lack sufficient access to high-speed broadband service to facilitate economic development. In order to facilitate the coordinated development of these programs, NTIA and RUS will host a series of public meetings related to the NTIA's and RUS' broadband Recovery Act activities beginning on March 16, 2009. These meetings are in addition to the Joint Meeting to be held on March 10, 2009 at the Department of Commerce. \1\ FCC representatives will participate in the public meetings related to the FCC's mission. The public meetings will be organized around key program themes, including but not limited to the definitions to be adopted, the role of the states in the grants process, the relationship of BTOP to the RUS loan and grant program and other Recovery Act programs, the grant selection criteria, the role of for-profit providers as potential grant recipients, and other topics.

\1\ Joint Notice of Public Meeting, 38 FR 8914 (Feb. 27, 2009).

Matters To Be Considered: Information is being sought on the following topics. Aspects of some of these topics will be discussed at the public meetings. Interested parties are invited to attend the meetings and to submit comments for the record on these topics to assist NTIA in establishing and administering BTOP and RUS in implementing its expanded authority. Comments addressing specific agency questions may be used by either agency in formulating its respective programs. Comments will be received through April 13, 2009.

-- END PREAMBLE --

CURRENT FCC DEFINITION OF BROADBAND AND BROADBAND SPEEDS

The term *broadband* commonly refers to high-speed Internet access. The FCC defines broadband service as data transmission speeds exceeding 200 kilobits per second (Kbps), or 200,000 bits per second, in at least one direction: downstream (from the Internet to the user's computer) or upstream (from the user's computer to the Internet). Under the new definition, "basic broadband" defines download speeds between 768Kbps and 1.5Mbps. At the new faster rate of 768Kbps, an American with basic broadband will be able to download a movie in 2.12 hours.

BROADBAND vs. DIAL-UP SERVICE

- Broadband service provides higher speed of data transmission—Allows more content to be carried through the transmission "pipeline."
- Broadband provides access to the highest quality Internet services—streaming media, VoIP (Internet phone), gaming, and interactive services. Many of these current and newly developing services require the transfer of large amounts of data which may not be technically feasible with dial-up service. Therefore, broadband service may be increasingly necessary to access the full range of services and opportunities that the Internet can offer.
- Broadband is always on—Does not block phone lines and no need to reconnect to network after logging off.
- Less delay in transmission of content when using broadband.

FCC - WHY IS BROADBAND IMPORTANT?

Broadband can provide you with the technical capability to access a wide range of resources, services, and products that can enhance your life in a variety of ways. These resources, services, and products include, but are not limited to:

- **Education, Culture, & Entertainment**
 - Broadband can overcome geographical and financial barriers to provide access to a wide range of educational, cultural, and recreational opportunities and resources.

- **Telehealth & Telemedicine**
 - Broadband can facilitate provision of medical care to unserved and underserved populations through remote diagnosis, treatment, monitoring, and consultations with specialists.
- **Economic Development/E-Commerce**
 - Broadband can promote economic development and revitalization through electronic commerce (e-commerce) by:
 - Creating new jobs and attracting new industries.
 - Providing access to regional, national, and worldwide markets.
- **Electronic Government (E-Government)**
 - Electronic government can help streamline people's interaction with government agencies, and provide information about government policies, procedures, benefits, and programs.
- **Public Safety and Homeland Security**
 - Broadband can help protect the public by facilitating and promoting public safety information and procedures, including, but not limited to:
 - Early warning/public alert systems and disaster preparation programs.
 - Remote security monitoring and real time security background checks.
 - Backup systems for public safety communications networks.
- **Broadband Communications Services**
 - Broadband provides access to new telecommunications technologies such as Voice Over Internet Protocol (VoIP) allowing voice communication using the Internet.
- **Communications Services for People With Disabilities**
 - Broadband permits users of Telecommunications Relay Services (TRS) to use Video Relay Services (VRS) to communicate more easily, quickly, and expressively with voice telephone users.

FCC - TYPES OF BROADBAND CONNECTIONS

Broadband includes several high-speed transmission technologies such as:

- [Digital Subscriber Line \(DSL\)](#)
- [Cable Modem](#)

- [Fiber](#)
- [Wireless](#)
- [Satellite](#)
- [Broadband over Powerlines \(BPL\)](#)

The broadband technology you choose will depend on a number of factors. These may include whether you are located in an urban or rural area, how broadband Internet access is packaged with other services (like voice telephone and home entertainment), price, and availability.

Digital Subscriber Line (DSL)

DSL is a wireline transmission technology that transmits data faster over traditional copper telephone lines already installed to homes and businesses. DSL-based broadband provides transmission speeds ranging from several hundred Kbps to millions of bits per second (Mbps). The availability and speed of your DSL service may depend on the distance from your home or business to the closest telephone company facility.

The following are types of DSL transmission technologies:

- **Asymmetrical Digital Subscriber Line (ADSL)** – used primarily by residential customers, such as Internet surfers, who receive a lot of data but do not send much. ADSL typically provides faster speed in the downstream direction than the upstream direction. ADSL allows faster downstream data transmission over the same line used to provide voice service, without disrupting regular telephone calls on that line.
- **Symmetrical Digital Subscriber Line (SDSL)** – used typically by businesses for services such as video conferencing, which need significant bandwidth both upstream and downstream.

Faster forms of DSL typically available to businesses include:

- **High-data-rate Digital Subscriber Line (HDSL)**; and
- **Very High-data-rate Digital Subscriber Line (VDSL)**.

Cable Modem

- Cable modem service enables cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV set.
- Most cable modems are external devices that have two connections, one to the cable wall outlet and the other to a computer. They provide transmission speeds of 1.5 Mbps or more.
- Subscribers can access their cable modem service simply by turning on their computers without dialing-up an ISP. You can still watch cable TV while using it. Transmission speeds vary depending on the type of cable modem, cable network, and traffic load. Speeds are comparable to DSL.

Fiber

- Fiber, or fiber optic, is a newer technology available for providing broadband. Fiber optic technology converts electrical signals carrying data to light and sends the light through transparent glass fibers about the diameter of a human hair. Fiber transmits data at speeds far exceeding current DSL or cable modem speeds, typically by tens or even hundreds of Mbps.
- The actual speed you experience will vary depending upon a variety of factors, such as how close to your computer the service provider brings the fiber, and how the service provider configures the service, including the amount of bandwidth used. The same fiber providing your broadband can also simultaneously deliver voice (VoIP) and video services, including video-on-demand.
- Telecommunications providers (mostly telephone companies) are offering fiber broadband in limited areas and have announced plans to expand their fiber networks and offer bundled voice, Internet access, and video services.
- Variations of the technology run the fiber all the way to the customer's home or business, to the curb outside, or to a location somewhere between the provider's facilities and the customer.

Wireless

- Wireless broadband connects a home or business to the Internet using a radio link between the customer's location and the service provider's facility. Wireless broadband can be mobile, nomadic or fixed.

- Wireless technologies using longer range directional equipment provide broadband service in remote or sparsely populated areas where DSL or cable modem service would be costly to provide. Speeds are generally comparable to DSL and cable modem. An external antenna is usually required.
- Fixed wireless broadband service is becoming more and more widely available at airports, city parks, bookstores, and other public locations called “hotspots.” Hotspots generally use a short-range technology that provides speeds up to 54 Mbps. Wireless fidelity (Wi-Fi) technology is also often used in conjunction with DSL or cable modem service to connect devices within a home or business to the Internet via a broadband connection.
- Mobile wireless broadband services are also becoming available from mobile telephone service providers and others. These services are generally appropriate for highly-mobile customers and require a special PC card with a built in antenna that plugs into a user’s laptop computer. Generally, they provide lower speeds, in the range of several hundred Kbps.

Satellite

- Just as satellites orbiting the earth provide necessary links for telephone and television service, they can also provide links for broadband. Satellite broadband is another form of wireless broadband, also useful for serving remote or sparsely populated areas.
- Downstream and upstream speeds for satellite broadband depend on several factors, including the provider and service package purchased, the consumer’s line of sight to the orbiting satellite, and the weather. Typically a consumer can expect to receive (download) at a speed of about 500 Kbps and send (upload) at a speed of about 80 Kbps. These speeds may be slower than DSL and cable modem, but download speed is about 10 times faster than download speed with dial-up Internet access. Service can be disrupted in extreme weather conditions.

Broadband over Powerline (BPL)

- BPL is the delivery of broadband over the existing low and medium voltage electric power distribution network. BPL speeds are comparable to DSL and cable modem speeds. BPL can be provided to homes using existing electrical connections and outlets.

- BPL is an emerging technology, currently available in very limited areas. It has significant potential because power lines are installed virtually everywhere, alleviating the need to build new broadband facilities to every customer.

FCC - BROADBAND IN RURAL AREAS

Because of relatively low population density, topographical barriers, and greater geographical distances, broadband service may be more difficult to obtain in some rural areas. In attempting to address these challenges, some rural Communities have found it helpful to develop a strategic plan for broadband deployment that includes creating a comprehensive business proposal to broadband providers. Such a plan, for example, could demonstrate to broadband providers that deployment is a sound business decision that would benefit both the providers and the community. This strategic planning process may include, but is not limited to, the following elements and strategies:

- Educating the community about the potential benefits of broadband service.
- Creating partnerships among community organizations and institutions that might benefit from broadband deployment.
- Systematic assessment and prioritization of the community's needs for broadband service.
- Aggregating (consolidating) demand within the community to make service profitable for broadband providers. Participants may include, but are not limited to, individual consumers, businesses, educational institutions, health care facilities, and government agencies.
- Identifying an anchor tenant with adequate demand to spur infrastructure investment in broadband.

Source: <http://www.fcc.gov/cgb/broadband.html>

DOCUMENT SUMMARY RESPONSE TO NTIA, RUS, FCC BTOP INITIATIVES

The above mentioned broadband delivery methods have been in use for some time and as we graduate to newer high speed broadband wireless technologies it is important to levy these new technologies to provide Urban, Suburban **and** Rural markets with delivery methods that are uniform and consistent. In every sense it is time to "cut the cord" wherever possible to provide **core** broadband wireless communications and internet access for all Urban, Suburban **and** Rural markets at speeds faster than Cable and DSL can deliver today.

The technology exists today to provide all Americans, Businesses, Local Governments (Municipalities), School Systems, Public Safety/First Responders, Health Care Professionals and Low-Income Households, all of which reside or operate in Urban, Suburban and Rural markets, with low cost ubiquitous high speed secure broadband wireless communications and internet access in a variety of licensed and un-licensed spectrums. As of now (due to past Administrations support of large incumbents) the American people are beholding to the FCC and Federal Legislators as to how this spectrum will be sold, leased, registered, and finally deployed and this will determine the future of Broadband within the United States.

The past FCC and Federal Legislators have been influenced by, and have allowed, large incumbents such as AT&T, Verizon, Comcast, Time Warner, Sprint/Clearwire (now "Clear"), to acquire or lease our spectrum assets and use their influence (lobbyist's) to monopolize the wireless industry to the point that every American or Business will be beholding to these large incumbents to provide services at ridiculously high prices. This model has only been perpetuated in the United States and is the reason that Americans pay more for communications and internet access than any other nation in the World.

In today's wireless marketplace these incumbents are simply "middle men" and we pay for that. AT&T/Verizon and other large Telecoms bid \$19 Billion+ for the rights to the 700MHz spectrum at auction in January 2008. Where has this money gone FCC? It is an atrocity that a Government organization (the FCC) can monopolize and profit from airwaves that are all around us and that simply exist on our planet.

Even worse, Sprint/Nextel and Clearwire were allowed by the FCC to approach **our** local School Boards, Churches, and other Non-Profits in **our** Communities, Cities and Counties within the United States to secure long term leasing rights (15-30 years) using very questionable business tactics to secure those leases in our Community 2.5GHz Educational Broadband Service (EBS) band for launch of their 'nationwide' WiMAX network. Sprint has now turned over their leases to Clearwire for nationwide launch of "CLEAR"

With that being said let's first look at the opening remarks of acting FCC Chairman Michael Copps at the first public meeting hosted by the Department of Commerce NTIA and the Department of Agriculture RUS on March 16, 2009 and then take a closer look at what actually happened with our Community 2.5GHz EBS spectrum, the 700MHz auction that took place in January 2008, and the past FCC Administration and Federal Legislators role in allowing these monopolies to be formed.

CHAIRMAN COPPS: Thank you. Good morning. Thanks, Anna, for the very nice introduction. The Commerce Department is truly lucky to have such a terrific FCC alum, and that comes from a Commerce alum that has gone to the FCC. This is a beautiful day. I'm pleased to be back here in this beautiful hall of commerce where I see many old friends that bring back many good memories from my years here in the 1990s, and it's good being here with the Secretary of Agriculture, Tom Vilsack, and commerce's Acting Chief of Staff Rick Wade to launch at long last a proactive broadband build-up for our country.

I also want to recognize and thank my friend and colleague from the FCC, Commissioner Jonathan Adelstein who is here and who has been working tirelessly at the Commission as an advocate for rural broadband since he came to the Commission. Together we have been asking for years, where is the policy for broadband? Where is the action? Where's the national commitment? Where's the beef?

The fact that we are here today talking about President Barack Obama's bringing broadband to all corners of the country should be evidence enough for everyone here if you need any more evidence that change has truly come to Washington. Seven years ago, shortly after I went to the FCC, the Commission issued another of its Congressionally-mandated Section 706 reports about whether advanced telecom services were being deployed around America in a reasonable and timely

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Submitted by:

Brad Bowman • Program Director • AccessDelray.org • 561.252.4764
<http://www.AccessDelray.org> • bbowman@accessdelray.org

fashion. And the answer was always yes, everything's great. Don't worry, be happy. But I wasn't happy, and I did worry. And just last week we got another of those many reports telling us how far the United States has fallen in the ranking of nations when it comes to broadband.

This one from the International Telecommunications Union concluding that your country and mine has now slipped to a dismal number 17. Too few consumers and small businesses in this country have the high speed broadband they need if they're going to succeed. We pay too much for service that is too slow. It's holding us back as individuals, it has cost our economy billions, and things are only going to get worse if we don't do something about it.

Now, thanks to the vision of the President and the foresight of Congress, we are doing something about it. The years of broadband drift and growing digital divides are coming to an end. We begin to understand how key broadband infrastructure is to the future of each and every one of us. Broadband is a central infrastructure challenge of our time. Earlier generations of Americans, going all the way back to the beginning, met and mastered their own great infrastructure challenges. They built roads and turnpikes and bridges to get settlers' produce back to markets, they built regional and vast transcontinental railroads to bind the burgeoning nation today. They put power lines and basic telephone service out to every hamlet in America. They built a web of interstate highways to deliver the mobility that we all wanted. They did it by working together, innovative private enterprise encouraged by far-seeing public policy. But you know, we forgot those lessons on how to build our country when it came to the roads and highways and bridges of the 21st century. High speed broadband.

So we lost precious time. We lost golden opportunities. We shortchanged our economy, our kids, and ourselves. Well, today we say enough. We mobilize and we begin to build. And I am pleased at the recently enacted and altogether historic Recovery and Reinvestment Act of 2009 gives the FCC an important role to play in turning our new national commitment into a workable national strategy.

We are already hard at work on the job and it's my intention that at our next full Commission meeting on April 8th we will kick off an open, participatory public process with a far-reaching notice of inquiry to marshal the data and expertise we need to have to make sure that we can meet our legislatively mandated date of one

year for presenting Congress and the American people with a national broadband strategy worthy of the name.

In doing so, we will put the FCC in the position of having the hard data necessary to support sound policy-making for the future. And working with NTIA, we will have important new tools, like a national broadband map to help us gauge how the efforts begun today are actually progressing. This will be a truly inclusive process. It will have comprehensive private sector and public sector input. It will ask the tough questions that must be answered if we are going to succeed. It will search out a myriad of traditional and nontraditional stakeholders who deserve to be heard, consumers, industry, labor, public interest organizations, local, state, and Federal government, all the agencies gathered here for openers, but very likely just about every other agency of government, too.

Because the goal of our national strategy must be to bring value-laden high-speed broadband to all of our citizens, no matter who they are or where they live, rural or needy, living in a comfortable condo or not-so-comfortable tribal land, physically able or dealing with a disability. "All" must mean everyone.

And we will endeavor to ignore no sector of our national life. Stop to think about it for a moment. What doesn't broadband impact as we look to the future of America? Not just the basic ways we communicate with one another, but health care information technology and the need to computerize medical records. Better utilization of scarce energy resources through the use of smart grids. Higher education and the needs of schools, libraries, and students as they gear up for the challenges of the 21st century. More efficient agriculture. Better housing. Public safety and cyber-security. Education. The environment. Each of these presents its own questions and new opportunities which need to be examined as part of a national broadband plan. I should note that as a preliminary step today, the Commission issued a public notice asking for comment on how there can be better interagency coordination of broadband initiatives in order to develop a report on a rural broadband strategy by May of this year in response to the farm bill passed last year by Congress. This is just a first step in a larger picture, and it's one that should have been addressed by the Commission much more seriously many months ago.

So I am pleased to be here as part of this interagency effort, to put us on a real road to broadband, a road carefully laid out, funded and incentivized and solidly

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Submitted by:

Brad Bowman • Program Director • AccessDelray.org • 561.252.4764
<http://www.AccessDelray.org> • bbowman@accessdelray.org

built to meet our country's pressing needs. If business and government and stakeholders of every kind can all work together to make this happen, it will happen. We can do this job. Success will be measured in jobs for our people, better health, education, self-fulfillment for each of us as individuals, and renewed economic opportunities for our country's goods and services around the world. Talk about the game being worth the candle.

This is precisely how we built this country of ours... infrastructure challenge by infrastructure challenge. And it is how we will get it growing again and how we will keep it great. So thank you for having me here and consider me and the agency I have the privilege of representing here signed up for the duration.

Thank you very much.

While Chairman Copps remarks were encouraging and expressed the need for change the fact remains that the damage has already been done by the past FCC administration. AT&T, Verizon, and Clearwire now control much of the 700MHz and 2.5GHz spectrum to monopolize wireless communications and services in major markets nationwide.

One comment was particularly interesting during Acting Chairman Copps introduction in that he mentioned "*Earlier generations of Americans, going all the way back to the beginning, met and mastered their own great infrastructure challenges... They put [power lines and] basic telephone service out to every hamlet in America.*"

Back then, what was borne of this was a Monopoly. It's been 25 years since Judge Harold Green ended AT&T Inc.'s monopoly of the phone business, and while the industry has indeed seen unprecedented innovation, the state of competition continues to fail the consumer in the new wireless communications and internet access markets... thus the reason for our dismal 17th ranking among Nations deploying broadband. Are we headed down the same path here?

<http://www.xchangemag.com/articles/ma-bells-break-up-25-years-later.html>.

And not to knock Acting Chairman Copps vision, but where is Julius Genachowski (appointed by President Obama to head the FCC) and when will he take office? Why have we not heard from him? Genachowski is replacing Kevin Martin, who has proven to be such an enemy of the citizens, so obviously biased in favor of the

big phone and cable companies (he was a lobbyist, after all), that anyone with a sense of fairness and common sense would look like an improvement.

So how can the United States and our new Broadband initiatives come to the forefront so we can become a World leader and rebound from our dismal 17th world ranking in such deployments? And how can we justify spending \$7.2 Billion on broadband deployments that address mostly rural markets without taking into account the needs of Local Governments, Municipalities, Communities, Cities and Counties and their desire to provide revenue generating **core** communications and internet access for their citizenry and businesses? We cannot look to Sprint/Clearwire because what City or County would want Sprint/Clearwire operating their City or County network, receiving revenue, and pulling every dollar possible from our Cities and Counties for basic **core** communications and internet access?

And how can the BTOP justify spending \$7.2 Billion for segmented markets while Sprint/Clearwire, Comcast, Time Warner and others are budgeting (only) \$3.2 Billion for a nationwide, high speed mobile WiMAX network?

What we need to do is present a solution that will benefit Communities, Municipalities, Cities and Counties in Urban, Suburban **and** Rural markets and will allow these Communities to define their own broadband futures. To do this we must first look at the overall desire of the American people and Businesses to accomplish this goal.

Many Americans and Public Officials are not aware of how the all important spectrum has been “sold” or allowed to be “leased” by ousted FCC Chair Kevin Martin and Federal Legislators so let us take a closer look.

History of Municipal, Community, City Wide, or County Wide Wireless

At some point over the past 5 to 8+ years or so almost all major Cities, Municipalities or Counties within the U.S. have issued RFI's or RFP's initiating projects that would attempt to bring wireless infrastructures to their Citizenry, Local Businesses, and Government in their Urban, Suburban **and** Rural markets. City and County Officials, Network Providers, and numerous proponents of these necessary components for our Communities have worked tirelessly to bring these

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Submitted by:

Brad Bowman • Program Director • AccessDelray.org • 561.252.4764
<http://www.AccessDelray.org> • bbowman@accessdelray.org

broadband wireless networks to fruition.

Kudos to Minneapolis and their staunch efforts with USI Wireless to not only come up with a working and scalable wireless network, but aggressively negotiating for substantial funding that would support local digital access, inclusion and literacy for low-income households and other community outreach programs.

Also, Brookline, MA, and the level of excitement that was generated by local city officials, IT staff, public safety and the overall commitment from the community to launch their wireless services.

There are other sporadic deployments, however these types of success stories are few and far between in the new U.S. broadband wireless arena and many City, Municipal or County issued RFI's and RFP's have found the circular file.

We only need to look as far as the past FCC (Federal Communications Commission) and Federal Legislators to understand why the United States has fallen behind in broadband wireless deployments (17th in the World). The FCC's and Federal Legislator's lack of vision and direct support of large incumbent network operators and service providers have only tied the hands of Local Governments, Cities and/or Counties and made it impossible for cash-starved Cities, Municipalities and Communities to realize the full benefits and revenue generation by developing and deploying broadband wireless infrastructures for their constituents in Urban, Suburban and Rural markets.

Large incumbents in this marketplace have no specific plan or business case and have not invited public participation in their efforts on how to best identify the public need, deliver broadband communications and services, and collaborate with Communities and Local Governments to present a workable operating and revenue model that will enable Cities, Municipalities, and Communities to define their own path towards their broadband future. The United States is an extremely internet savvy base, and they want their say in this matter.

It is a fact that there is no room for a middle man in the offering of core network access and services as evidenced by Earthlink's and AT&T's retreat from the Muni-Wireless marketplace.

As a result Municipalities have run into constant road blocks attributed to the limitations of viable solutions, created by the FCC and Federal Legislators, and their rule changes in the 2.5GHz EBS spectrum (formerly the ITFS) and the mediocrity that was the 700MHz auction held in January of 2008. All the FCC did was allow 'duopolies' to be created during these processes representative of Sprint Nextel and Clearwire in our Community EBS spectrum arena and ATT and Verizon in the 700MHz spectrum arena.

This will all change with the advent of the new American Recovery and Reinvestment Act and newer broadband wireless technologies and will allow Cities, Municipalities, and Communities to fully exploit the synergies available between their Citizenry, Businesses, Constituents, Local Government and their new high speed broadband wireless network using 3.65GHz, 5.nGHz, 4.9GHz and 2.4GHz spectrum .

The stakes have never been higher for Cities and Counties exploring the broadband wireless opportunity and they should seize control of their broadband futures right now.

At the same time, the path to viable implementation remains complex, only due to the FCC's biased decision making that benefited large incumbent network operators and service providers. Municipalities, Communities, Businesses and their Citizenry are going to have to forge their efforts in order to get what they have wanted for years... a plan for their broadband future.

There is a viable solution to all of this that will benefit Cities, Municipalities and Counties in Urban, Suburban *and* Rural markets to promote competition in the marketplace, expedite and fund build-out of available spectrums, without effecting large incumbent network operators and service providers and their ability to maintain their strength in the marketplace and sustain their bottom line profits.

But before we get to that it is important to lay out the brief history of the questionable rule changes in the Community 2.5GHz EBS spectrum and the mediocrity that was the auction of the 700MHz spectrum, which the FCC facilitated, that will inevitably change the way we live our lives, conduct business, receive our entertainment, interact and communicate on a social level, and address

socio-economic issues that plague our Local Governments and Communities on a daily basis.

History of the 2.5GHz Community Educational Broadband Spectrum – Sprint/Nextel & Clearwire

Back in the 1960's and 70's the FCC assigned the 2.5GHz spectrum to non-profits such as local colleges, universities, churches and school boards. It was called the Instructional Television Fixed Spectrum (ITFS). This community asset was to be used to broadcast television signals within their community that would offer educational content and to support on-going distance learning for students and faculty within their coverage area. This coverage area normally blanketed a 35 mile radius.

In 2004, the FCC changed the rules on this under-utilized spectrum to allow for commercial broadband wireless service to be offered. They even had the gumption to change the name to the Educational Broadband Spectrum (EBS). Needless to say, this spectrum real estate went from swamp land to ocean front property immediately. These EBS licensees were then approached by Sprint Nextel and Clearwire with checkbooks in hand, as EBS licensees clamored to check on the status of their current EBS license with the FCC. In most cases, these licenses needed to be renewed and in some cases the licensee was not even aware they had rights to this community asset.

This is representative of how the FCC did not educate the ITFS or the licensees, prior to the rule changes, on the capabilities of the asset which in turn would have led to more due diligence on the part of EBS licensees to assess the capabilities and value of their asset at that point and in the future.

At this time Sprint/Nextel and Clearwire aggressively pursued long term lease arrangements with then current licensees of the EBS spectrum. This licensed spectrum was well suited for Wi-Fi's big brother WiMAX, which was gaining strength in the marketplace as the next generation wireless technology.

These non-profits were told by Sprint Nextel and Clearwire that the costs involved in building out development and deployment of their spectrum would be very high so in the eyes of the decision makers, namely Boards of Trustees (who, in most

cases, are dis-attached from newer technology), it made sense to adhere to the lucrative offers (in their eyes) from these large companies.

If the current 2.5GHz licensees would have performed more due diligence on their asset they would have realized that the costs involved in rolling out their spectrum would have been very expensive at that time, based on product availability and standards of that time.

All they would have had to do is look at the current Wi-Fi (802.11) market to realize that more equipment manufacturers would be entering the WiMAX marketplace in the future and that costs would be reduced dramatically, much like Wi-Fi is inexpensive now. On a more simple level, due diligence could have been done by searching 'WiMAX' and researchers would have had all the information they needed to get started on a proper due diligence processes.

However, this did not happen and the lure of the cash was too tempting. This also led to a snowball effect that gathered these EBS licensees in groves throughout our Country, all falling prey to questionable business tactics by Sprint Nextel and Clearwire. In fact, these lease deals are also going to be investigated by congress and consumer advocacy groups and patent law suits are pending.

To paraphrase eminent outside Counsel that advised upon and completed many of these lease deals *"it is all about who is offering the most money [Sprint/Nextel or Clearwire] and addressing the immediate needs of cash starved non-profits, their faculty, students, or constituents"*.

You can hardly blame counsel for pushing these deals through because of the amount of money they would receive for their services. As goes the money, so goes the so called community "Educational Broadband Spectrum".

As these lease deals represented a significant windfall for non-profits, it is dwarfed by the amount of revenues that will be generated through WiMAX services within any geographical service area (GSA).

Recently Time Warner, Comcast, Sprint, and Clearwire (Google, BrightHouse, and others involved, also) announced that they have come together to pony up \$3.2 billion dollars to expedite WiMAX roll out. This is great for Sprint/Clearwire and

our cable company incumbents as they needed a wireless strategy as we migrate away from being tied to their wired RG6 (cable).

Now (not surprisingly) Sprint and Clearwire have cut a deal, approved by the outgoing FCC and Federal Legislators (on election day, 2008) that all spectrum assets will fall under the new brand "Clear" managed by Clearwire.

The big difference here is the blatant attempt of these large, incumbent Cable and Telecom companies to assume that we will look to them to provide ALL of our **core** access services and applications as well as enhanced entertainment, audio, video, communications, and so on.

Cities and Communities will welcome large incumbent enhanced entertainment and communications services, which everyone that can afford them will want, but let our Communities, Municipalities and Cities design, implement, and generate revenue from our **core** network access, community, and municipal based peripheral applications.

The Cities, Communities, Businesses and Citizenry are the asset here. Large Telecom and Cable incumbents are now just a few of many service providers that will be entering the market in 2009 and beyond. Therefore, Cities and Communities need to leverage their asset they maintain (their businesses and populous), promote competition, and discourage large incumbents from competing for core access and services to pull every dollar possible from our Communities and Cities. As a society, we will be migrating from wire line (cable, twisted pair) to the airwaves and these airwaves already exist for everyone to benefit from.

The big question in this environment is "Why these non-profits are not building out there core 2.5GHz network in conjunction with local municipal 3.65GHz WiMAX public/private partnerships and establishing core infrastructure and operating/revenue models in their 2.5GHz spectrum before leasing to these companies?"

With all of that said, incumbent Telco's and cable companies should be concentrating on developing stronger relationships and strategies with large digital media and content distributors (Viacom, Sony, Paramount, MGM, EMI Publishing, etc.) instead of trying to figure out how to monopolize the core access and services

market.

Sprint/Clearwire is just another service provider that the FCC allowed to monopolize our Community 2.5GHz Educational Broadband Spectrum. This is the definition of “discriminatory practices” and the FCC allowed it to happen. This spectrum would have been a great asset for BTOP and private sector investment would have been lining up to invest in projects that would have built out this spectrum in our Counties, Cities and Communities.

As of now, Sprint Nextel and Clearwire have ‘negotiated’ long term lease deals (15-30 years) and locked up 85%+ of the 2.5GHz EBS... and Sprint has now partnered with Clearwire to offer ‘CLEAR’... thus the status of WiMAX using our Community 2.5GHz Educational Broadband Spectrum.

The 700MHz Spectrum

There is no doubt that most everyone is aware that “free” TV will be going digital in June of 2009. There are advertisements on television today that say people without cable or satellite will need special converter boxes to view their local programming. Good job FCC, but where is the education and what does this actually mean for the American public?

Well, one thing is that this spectrum will be used for commercial broadband and greatly enhanced entertainment and communications services. Another is the fact that “channel surfing” will become much more channel specific as selective programming, downloads and digital streaming will become common place and directed to set top monitors where our televisions used to reside. Don’t worry, your remote will change but you will not have to get off your couch! This will also lead to households requiring terabytes of local disc storage. (Please visit H.R. 2738: Family and Consumer Choice Act of 2007)

But enough of the wishful thinking and let’s get down to the brass tacks as to how the FCC handled the licensing and sale for this spectrum.

As with the 2.5GHz Community EBS, the FCC was hoping for a competitive marketplace in the development and deployment of the 700MHz spectrum. It was also the goal of the FCC to receive bids on the 700MHz D Block that would have

provided a much needed nationwide public safety network to be implemented during times of a national emergency or terrorist attack. None of this happened.

AT&T and Verizon were the big winners and the D Block did not meet the reserve price of \$1.33 billion so it is still out there. Congress is now involved and will have a say as to how the D Block will be auctioned or assigned.

There is also some controversy surrounding the D Block auction in that Frontline Communications was ready to work with the PSST (Public Safety Spectrum Trust) but all of the sudden ended up closing their doors just weeks before the auction was to take place. This left little time for other companies to pull resources and bid.

Then rumors surfaced that this piece of spectrum would be auctioned as commercial broadband thus firing up the interests, once again, of the incumbent winners in the A,B,C, and E blocks of the spectrum.

But the fact still remains that a ‘du-opoly’ came out of the 700MHz commercial side, very similar to what happened with the 2.5 EBS spectrum. So when this spectrum is ready for market, they will be facing the same challenges as 2.5GHz WiMAX is facing now, and will look to the operating and revenue models put forth by Comcast and Time Warner as the ‘first-to-market’ marketing arm for Sprint and Clearwire’s licensed, exclusive (expensive) leased spectrum.

Rather than go on about the FCC’s role in the outcome of the 700MHz auction please visit the testimony of Harold Feld on behalf of the Public Interest Spectrum Coalition as presented to Congress on April 15, 2008. He provides an honest appraisal of what this auction represented. Here is an excerpt:

“The 700 MHz Auction was both the most successful auction in FCC history and perhaps the worst failure in Communications policy in recent memory. The paradox is possible because the FCC, and sadly, not a few members of Congress as well, have reduced the entire public interest analysis for auctions to four words: “show us the money.” The auction statute gives a lengthy list of public interest goals: increasing competition and avoiding “undue concentration of licenses;” promoting ownership opportunities for small businesses – especially rural, woman owned, and minority owned businesses; and providing to all Americans the economic and social benefits of wireless.

To these we added to the hopes for the 700 MHz auction the creation of a wireless “third pipe” broadband provider to keep with the broadband cable modem service and DSL duopoly that controls over 90% of the residential broadband market. Finally, we expected the D Block public/private partnership with public safety to build the national, interoperable broadband public safety network that the 9/11 Commission and everyone else agrees we need...None of that happened.”

One other important aspect to consider relative to both spectrums is the CPE (customer premise equipment) or other devices that will be required and more than likely purchased from “the Big 4” however we are too early into the processes to wager an opinion on how this will present.

Again, large incumbent Telco’s and cable companies should be concentrating on developing stronger relationships and strategies with digital media and content distributors (Viacom, Sony, Paramount, MGM, EMI Publishing, etc.) instead of trying to figure out how to monopolize the core access and services market.

The FCC Debacle over the Past Eight+ Years

In their efforts to protect large incumbents the past FCC administration seems to have forgotten that there is plenty of spectrum that is available for broadband wireless deployments. 3.65GHz WiMAX is getting a lot of publicity lately. This spectrum requires licensing from the FCC but is non-exclusive.

That means that once spectrum use is approved for use by the FCC or other license holders in a specific geographical service area (GSA), only that licensed operator can establish a footprint in that GSA. 3.65GHz WiMAX has a legitimate shot at becoming the core spectrum of choice for Counties, Cities and Communities desiring broadband wireless infrastructures and when coupled with 5.8GHz, 4.9GHz and other licensed and non-licensed spectrums can develop and deploy very robust wireless network infrastructures for their Local Governments, Businesses, Residents and Tourists.

3.65GHz WiMAX -- Fixed and Nomadic Broadband Wireless for Urban, Suburban *and* Rural Markets (along with 5.nGHz & 4.9GHz)

3.65GHz WiMAX can provide for low cost entry into the marketplace and empower Cities and Counties (and their destination markets including Urban, Suburban and Rural markets) with robust high speed core network services and applications that are required to sustain as a Community and Government. And as we move towards 'E-Government' this also would allow for seamless migration to the technologies that will inevitably be necessary to operate and enhance government productivity, leading to direct costs savings, while providing much needed funding for specific community outreach programs and initiatives.

As part of an addendum to the new American Recovery and Reinvestment Act and the Broadband Technology Opportunities Program (BTOP) new language should be included that will outline specific Public/Private partnership models that will be required for all Cities, Counties, Municipalities, or pretty much every entity desiring their own large scale broadband wireless network within the United States.

These Public/Private partnerships will be borne of the Cities and Communities they represent (and in which the network will reside), key stakeholders and private sector monies from banks within the Community or City, along with strategic partnerships with national non-profits like One-Economy Corp. or other Foundation / Philanthropic support to address Digital Access, Inclusion and Literacy initiatives.

Allowing any qualifying City, Municipality, or Community the ability to launch large scale 3.65GHz, 5.8GHz and 4.9GHz broadband wireless networks, formed as a Public/Private partnership, to provide core network and application access for their Citizenry, Businesses, and Local Governments, Communities or constituents in Urban, Suburban *and* Rural markets would provide for the following:

- **Enhanced Public Safety, First Responder Applications**
- **Municipal Departmental Applications**
- **Reduced cost internet core access for residents, businesses, visitors and**

tourists

- **VoIP (Voice over Internet Protocol using any qualified provider or proprietary build)**
- **High speed broadband wireless communications and internet access for Urban, Suburban and Rural markets**
- **Health Care and TeleMedicine Services**
- **Digital Access, Inclusion, Literacy Programs (Low-Income Households)**
- **Economic Stimulus**
- **Destination Market services and applications**
- **Public access “television”**
- **Public Utility Services**
- **Local business internet marketing services, residential, and community portals**
- **Deploy New Energy Technologies / Energy Management Services (EMS) / Green Initiatives**
- **Matching rebate scheduling and/or energy credits through the State Energy Offices**
- **School system enhancements / Educational tools**
- **Public Employee Services**
- **VPN's / VAR's / Reseller Services**
- **Employer Outreach / Distance Learning & Training**
- **Exponential Job Creation by providing core communications and internet access in Urban, Suburban *and* Rural markets**
- **Visitor Services / Hospitality Packages**
- **Private Security / Video Surveillance / DVR Remote Access**
- **Digital Connectors Programs for Low-Income Individuals and Households**

Allowing Municipalities or Counties to provide their Citizenry and Businesses, within Urban, Suburban *and* Rural markets, with the above mentioned *core* communications, internet access and local services; and to maintain consistent revenue streams from core access and services would trigger:

- A much faster rollout of newer 3.65GHz WiMAX (fixed, nomadic) and 2.5GHz WiMAX (mobile) deployments and future 700MHz broadband deployments
- The realization that this unique approach represents a fundamental improvement to traditional operating and revenue models in the broadband wireless arena and will facilitate migration to newer technologies

- Provides for a competitive market in the municipal wireless arena by allowing more equipment manufacturers and VAR's to enter the US market
- Incumbent network operators and service providers would be able to build from that core infrastructure to provide the enhanced entertainment and communications services that they currently offer and/or new equipment and services based on other forms of fixed and mobile digital media, entertainment, and communications
- Overall improvement in nationwide spectrum management
- City broadband would be able to facilitate and help to fund the deployment and operations of 700MHz commercial broadband and the PSST Nationwide 700 MHz D-Block Public Safety Network along with assigned or contracted public broadband services available through D Block spectrum and;
- Development and deployment of a business model that basically funds itself

If city 3.65GHz WiMAX, nationwide 2.5GHz WiMAX, and 700MHz are all expected to compete for core internet access and services in the same market, in conjunction with enhanced service offerings, then this will actually lead to a less competitive market, higher costs, and even worse spectrum management.

While core internet access and municipal services in 3.65GHz WiMAX will be an integral part of any urban, suburban and rural broadband deployment, it is also these core services that are going to present a unique and feasible solution for sustainable large scale wireless broadband operating and revenue models in 2.5GHz WiMAX and 700MHz spectrum.

As we move forward it is important to address the needs of Communities and Municipalities from both a technological and socio-economic scale. The last thing that Cities or Communities need is for large network operators or service providers to blanket these areas with expensive coverage and compete to pull every dollar they can from those Cities or Communities that are fighting to sustain themselves.

Budget concerns, public safety, re-development, economic stimulus, digital divide and socio-economic issues all weigh heavily in the day to day operations of local municipal government and the well is drying up. It is for these reasons that the Community Broadband Act of 2007 was authored and is up for approval by government officials.

It has been said that Cities should be able to offer broadband services much like

they offer water, sewer, and garbage pickup. While this may seem like a no-brainer to some people, this bill has met with opposition from incumbent Telco's and cable companies for reasons that can only be explained (amicably) as self-serving with the mask of responsibility to stock holders.

It is hard to fathom that these same stockholders would rather see the slow demise of the Communities they live in because of nominal increases (and decreases) in stock share values of large Telco's and cable companies. In fact, these stockholders will have a direct effect on their investments and sustainability of the Companies they are vested in by demanding changes in business and revenue models before the market takes them over.

Finally, fixed and nomadic 3.65GHz, 5.8GHz and 4.9GHz (PS mobile) broadband wireless deployments for Rural markets are going to provide better service and much faster speeds than that of DSL, Cable, or AirCards used by Public Safety in Urban, Suburban and Metro markets... so in essence Rural communities will be receiving better service than their Urban and Suburban counterparts. **How does the NTIA, RUS and the FCC plan on dealing with this issue and the many inquiries and demands from the American People, Businesses, and First Responders saying "we want that"?**

With all of that said, it is important that the FCC, federal government officials, Local Government, businesses, citizens and the large incumbent network operators and service providers look to fundamentally improve upon traditional deployment, operations, and revenue models and develop strategies that will benefit all involved.

Benefits of Newer Broadband Wireless Infrastructures in Relation to the New American Recovery & Reinvestment Act (ARRA)

According to the National Association of Telecommunications Officers and Advisors (NATOA), over the long term, broadband deployment helps virtually every economic sector. For every dollar invested in broadband, the economy sees a ten-fold return on that investment. A recent study, "The Economic Impact of Stimulating Broadband Nationally", suggests that a national program that increased broadband penetration by a mere 7 percent would yield a \$134 billion positive impact to the national economy and 2.4 million additional jobs.

The current American Recovery & Reinvestment Act (and past bills never making it through the lobbying efforts of large incumbent service providers) cites applications and services related to 'broadband' in thirty different inferences most of which address the following:

- Bridge the Digital Divide for our underserved Communities and provide digital access, inclusion, and literacy programs for all of our residents and businesses
- Bolster our local economies while improving upon socio-economic issues and communications through use of newer broadband wireless technologies
- Public Safety & First Responder applications
- Increase workforce development through on-site and distance learning modules provided by local employer outreach programs and national organizations
- Provide for enhanced municipal public safety and departmental applications that would that would benefit the community as a whole and result in direct cost savings and increased productivity for Local Government
- Provide commercial grade, low cost/free, high speed fixed, nomadic and mobile broadband wireless access and services within the coverage area
- Develop a revenue share model from which a portion of subscription fees to broadband wireless access and services would flow back to our community to help fund and sustain the aforementioned programs
- Develop a business and services model from which other Cities and Communities can replicate
- Develop programs that will be identifiable as an asset to larger network operators and service providers leading towards future partnerships with those incumbents leading to much improved overall spectrum management
- Identify and partner with key stakeholders within our Communities to fund, develop, deploy, and gauge the success of the aforementioned programs and;
- Identify and partner with key stakeholders within our United States to fund, develop, deploy, and gauge the success of the aforementioned programs.

ARRA Programs Directly Synergistic to City, County or State Wide Wireless Services (partial list)

Aid to State and Local Governments

- Economic development assistance programs \$150,000,000
- Matching funds from banks/private sector \$TBD
- State and local law enforcement assistance grants to improve criminal justice

systems, assist crime victims and mentor youth \$225,000,000

- State and local law enforcement assistance to Indian tribes \$225,000,000
- Internet crimes against children initiatives \$50,000,000
- Community Oriented Policing Services (COPS) grants \$1,000,000,000
- Community Development Financial Institutions Fund for financial assistance, training and outreach to Native American, Hawaiian and Alaskan native Communities \$100,000,000
- Local and state fire station upgrades and construction \$210,000,000
- State Fiscal Stabilization Fund to avoid cutbacks and layoffs (82% must be used for education while 18% may be used for public safety and other government services. The latter part may be used for repairs and modernization of K-12 schools and college and university buildings.) \$53,600,000,000

Education

- School improvement programs \$650,000,000
- Innovation and improvement of elementary and secondary schools \$200,000,000
- Institute of Education data systems \$245,000,000

Energy

- State energy program \$3,100,000,000

Health Care

- National Institutes of Health grants and contracts to renovate non-federal research facilities \$1,000,000,000
- Office of the National Coordinator for Health Information Technology \$1,680,000,000
- Department of Commerce health care information enterprise integration activities related to the Office of the National Coordinator for Health Information Technology \$20,000,000

Science and Technology

- Farm Service Agency salaries and expenses to maintain and modernize the information technology system \$50,000,000
- Distance learning, telemedicine and broadband program \$2,500,000,000
- National Telecommunications and Information Administration - broadband technology opportunities program \$4,690,000,000
- National Institute of Standards and Technology scientific and technical research and services \$220,000,000

- State Department technology security upgrades \$252,000,000
- U.S. Agency for International Development (USAID) technology \$38,000,000

Aid to People Affected by Economic Downturn

- State re-employment services for the jobless \$250,000,000
- Community Service Block Grant Program \$1,000,000,000
- Employer Outreach/Distance Learning/Job Creation

3.65GHz WiMAX and Municipal Operations (includes use of 5.nGHz and 4.9GHZ)

Direct Financial Savings & Increases in Productivity

By incorporating a 3.65GHz WiMAX (along with other spectrum) municipal wireless network the savings to municipal budgets will come in two forms.

First, there is an actual cash savings realized through a reduction in cell phone style wireless expenses and other forms of internet connectivity.

Second, is an increase in productivity, resulting in a financial windfall through FTE (full time employee) savings. These savings are not generally achieved through a reduction in staff but through the ability to not add personnel as quickly as a municipality grows due to advances in technology.

Direct Cash Savings

Most Cities today use laptops in their patrol cars and achieve connectivity through cellular cards. Typically, the monthly costs run about \$60-\$80 per car. In addition to the cost, the service itself is limited to the speed of the cellular provider's network.

If a municipality/city had 100 patrol cars that would equate to \$72,000 - \$96,000 per year. Since the 3.65GHz municipal network will cover the whole city that is where most of the time is spent by patrol cars.

If the city converted to a 3.65Ghz WiMAX (or 4.9GHz PS) this would allow the

city to cut the above costs in half and would provide for both internet/network connectivity and VoIP at better speeds and quality of service (QoS).

School systems typically have T-1 service to each school. This cost ranges from \$600 - \$1000 per month per school. These costs would be eliminated because each student would have ubiquitous high speed wireless connectivity throughout the coverage area from their own account.

If there were 10 different schools in the coverage area the savings would be significant.

Many Cities have fiber running throughout the city which is either leased or owned. In either case someone is being paid for access. With 3.65GHz WiMAX these services and leases would be discontinued.

Increases in Productivity

By incorporating the connectivity of a 3.65GHz municipal WiMAX network and appropriate peripheral devices, with procedural changes in workflow, significant productivity improvements can be achieved.

These improvements can rapidly translate into cash, bottom-line savings for the operational budgets of Municipalities. Below are some brief examples that represent only a fraction of the uses a 3.65 GHz WiMAX network can offer.

Building Department

- Inspectors typically complete inspection reports manually in the field, then transcribe those reports when they return to the office. This can be accomplished in the field in one step on a laptop or tablet and then uploaded instantly. Because of the efficiency and high speed of the 3.65GHz WiMAX these inspection reports can also include photos and blueprints where needed for documentation purposes. This translates into more time in the field.
- Inspectors can receive electronic inspection orders directly from the permitting office or city website to their laptops or tablets in the field, eliminating physically reporting in each morning to get their work orders.

Fire Department / EMS

- In the field firefighters typically have no way to access historical records or blueprints. Through 3.65GHz WiMAX they would be able to both access and update this information in the field.
- Remote access to secure lifesaving medical records.
- In field reporting and documentation

Police

- Remote locations such as parks, water and sewer plants or other facilities or problem areas can be monitored with remote cameras from either the police station and/or the patrol car. This gives the field officer a visual of what he or she is about to encounter.
- Alarm systems could also be monitored (for a fee) at the police station. The need for a central monitoring servicer would be eliminated and that would also eliminate the valuable time between the central monitoring trying to contact a home or business owner prior to contacting police/fire/EMS. This would also provide a revenue stream for the police/fire/EMS departments.
- Instant “Amber-Alert” capabilities.

Parks & Recreation

- All worker logs can be converted to electronic format, eliminating the need for supervisor’s to track in the field and then enter a second time into the central system.

Public Works

- Remote reading of water and/or electric meters.

These examples can go on and on almost indefinitely. But the bottom line is that there are considerable direct cost savings and productivity savings that lead to direct cost savings by deploying a 3.65GHz WiMAX network.

While it may not be possible to put a dollar figure on all the examples listed above it is also not really necessary.

- How do you put a price on a missing child that is found due to fast action of the police department and the ability to broadcast that child’s image citywide during the crucial first minutes the child goes missing?

- How do you put a price on a father's ability while traveling to watch his son's or daughter's soccer game being webcast on the Internet from remote wireless cameras located at the field?
- How do you put a price on protecting our first responders and providing them with tools that may save their life and the lives of others?

The unique nature of 3.65GHz WiMAX is that once you have built the core infrastructure to service the internal needs of a City or County you have already done most of the work required to service the Public, Businesses and Communities.

Another intriguing aspect is that the revenue generated from these systems remains in the community instead of large incumbent network operators competing to pull every dollar out.

As newer technology is introduced to our Communities and Local Governments it is important that everyone take the blinders off and realize the importance of building wireless infrastructures that will enable our Cities and Communities to define their own broadband futures.

Digital Access, Inclusion & Literacy (Under served, low-income households)

One major socio-economic issue that local governments are plagued with is providing low-income, poverty level households with low cost broadband wireless communications and internet access. Almost every RFP or RFI issued by Communities, Cities or Counties over the past years has included provisions that would incorporate programs that would benefit this demographic.

These programs can easily be accommodated by allowing Public/Private partnership investment, along with BTOP funding, to provide for broadband wireless communications and internet access for all constituencies within Urban, Suburban and Rural markets. A portion of revenue (profits) can be used to offset the cost of delivering and sustaining low cost services to this market segment.

Partnerships with organizations like One-Economy Corporation can also provide low-income or poverty level households with the tools necessary to receive the same ubiquitous communications and internet access capabilities that would be available for everyone within the Community. This in turn would lead to job creation, increased high school graduation rates, less crime, decreased teen pregnancies, and provide solutions for a plethora of socio-economic issues that Local, State, and Federal Governments deal with on a daily basis.

And as these programs become successful and sustainable, this can lead to Skills and Job Training Centers for all within Urban, Suburban and Rural geographical service areas.

Establishing Municipal, City or County Wide *Core* Broadband Wireless Infrastructures in Urban, Suburban and Rural Areas through Public/Private Partnerships

Back in 2007 a bill was introduced called the Community Broadband Act of 2007. The bill was sponsored by Sen. Frank Lautenberg (D-NJ) and co-sponsored by Sen. John McCain (R-AZ) and Sen. John Kerry (D-MA) among six other Senators.

It states “A bill to promote competition, to preserve the ability of Local Governments to provide broadband capability and services, and for other purposes.” It also states that “No State or Local Government statute, regulation, or other State or Local Government legal requirement may prohibit, or have the effect of prohibiting, any public provider from providing advanced telecommunications capability, or services using advanced telecommunications capability, to any person or any public or private entity.” It goes on to state that “Each public provider that intends to provide advanced telecommunications capability or services to the public is encouraged to consider the potential benefits of a public-private partnership prior to providing such capability or services”.

This bill is “dead” and has not become law (as of October 2007). While large Telco and Cable incumbents may have had something to do with why this bill did not reach the Senate or House Floor at least it was an attempt to bring broadband (wireless) infrastructures to our Local Governments, Residents and Businesses in Urban, Suburban and Rural markets.

Now that we are in the middle of a serious recession and the American people and businesses are experiencing the most severe economic crisis since the Great Depression it is imperative that our Local Governments, Cities and Communities be able to launch their own core broadband (wireless) infrastructures and receive revenue from such services.

It is also important that public/private partnerships be formed to manage the network, but more importantly, manage the revenues (profit) generated from these services. These monies may be used to fund any number of community outreach programs and/or help to sustain new Economic Stimulus programs from the ARRA that may be initiated by our local Communities, Cities and Counties.

These local public/private partnerships will consist of Local Government officials, key Business Leaders, School Boards, Non-Profits, Chambers of Commerce, Marketing Co-ops, Business Organizations, etc. within the geographical service area where the network will reside. This will ensure that the monies are properly disseminated to manage the network and to programs within the community that need it.

Regardless of whether Local Governments, Cities, or Counties purchase the system outright or take a totally hands off approach by allowing service providers to manage and operate the networks these public/private partnerships will play an integral role.

These ground level Public/Private partnerships are *the* necessary component to accomplish everything that BTOP, the NTIA, RUS and the Obama Administration are trying to achieve. Most importantly, these partnerships will provide for the transparency and increased public participation that is called for. They will also create a “sense of involvement” by the constituencies involved leading to increased “Social Capital”.

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The Process (Formation of the GSA Public/Private Partnership, Public Input, BTOP/State Responsibilities)

POTENTIAL STREAMLINED BTOP HIERARCHY OF PROCESSES AND FUNDING

BTOP, NTIA, RUS



MEMO TO NATIONAL ASSOCIATION OF COUNTIES

"FORMATION OF COUNTY OR LOCAL PUBLIC/PRIVATE PARTNERSHIPS"

Local Government, Business Leaders, Banks, Non-Profits, School Board/College Officials, Health Care Officials, Public Safety/First Responder Officials, Chambers of Commerce, Libraries, Hospitality, Re-Development Assoc., Digital Literacy, Local/National Service Providers, Media/TV, Stakeholders, and other individuals or organizations as each GSA will determine.



PUBLIC MEETINGS/ROUND TABLES HOSTED BY PUBLIC/PRIVATE PARTNERSHIPS

Determine need and functionality of Broadband Network for Residential, Businesses AND ORGANIZATIONS LISTED ABOVE. Determine best available Network Infrastructure (Wireless, Cable, DSL, Combo, Backhaul, Towers, etc.), determine Geographical Service Areas (GSA's), determine neighboring GSA's for interoperability, roaming, ubiquitous service.

Also determine Innovative Programs to Encourage Sustainable Adoption of Broadband service and Expanding Public Computer Center Capacity and how the new Broadband network will support and benefit other ARRA programs initiated within the GSA, as a whole (e.g. One Economy Corp, Community Connects, etc.)



REQUEST FOR PROPOSAL (RFP) OR REQUEST FOR INFORMATION (RFI)

Uploaded to BTOP funded Website from which qualified Local and National Service Providers can bid. Local and National Private Sector monies may also coordinate investment structure for Urban, Suburban and Rural markets within the GSA. % (TBD) Funding for Urban and Suburban networks. Use 20% rule for Urban networks.

Public/Private Partnership Responsibilities:

1. Before any Grant or Loan application can be submitted to BTOP (or the State) the formation of a qualified Public/Private partnership will be required for the Geographical Service Area (GSA) in which the broadband wireless network will be deployed. This Public/Private partnership will include representatives from Local Government, Local Business Leaders, Local Banks, Local Non-Profits, Local School Board Officials, Health Care Officials, Local Public Safety/First Responder Officials, Urban, Suburban and Rural Co-ops, Media/TV, and other individuals or organizations as each GSA will determine. Who better to determine the needs of their GSA than the constituency of that GSA?

2. Once the Local Public/Private Partnership has been formed public meetings will be held to gather information and input from their Citizenry and Local Businesses on specific operating and revenue models and the needs and functionality of the Community, Municipal, City or County broadband wireless network. GSA coverage areas will also be defined and coordinated with neighboring GSA's.
3. Once these steps have been completed, the Public/Private partnership will issue a Request for Proposal that will be posted on the BTOP website for bid.
4. Once the Public/Private partnership has awarded the contract to a qualifying WISP the contract will be forwarded to both the State and BTOP for approval of appropriate grant/loan monies in conjunction with national institutional and/or local private sector bond issue or investment in the network infrastructure. New Urban and Suburban wireless networks will receive a percentage of BTOP monies based on formulas derived from existing demographics, topography, propagation studies, and participating institutional and/or private sector investment, projected operating revenue and ROI models. Rural networks, which will most likely fall under County Public/Private partnership rules, can still be served under the "20% rule" proposed by BTOP.

BTOP / STATE Responsibilities: Carefully designed and specific criteria will lead to best implementation, monitoring and transparency for BTOP initiatives.

1. Develop standardized RFP models and templates for GSA Public/Private Partnerships to download and work from based upon [core broadband services](#) for Urban, Suburban, *and* Rural markets
2. Develop rules, stipulations, pricing schedules, tax credits for [core broadband services](#) based on GSA requirements and coverage areas
3. Develop rules and stipulations for Municipalities/Local Governments
4. Develop rules and stipulations for qualifying Service Providers
5. Develop rules and stipulations for qualifying National Institutional Private Sector Bond Issues and/or Equity Investment (Large Banks)
6. Develop rules and stipulations for qualifying Local Institutional Private Sector Bond Issues and/or Equity Investment (Local Banks)

7. Develop rules, stipulations and funding models for qualifying National Non-Profit Organizations (e.g. NEA, ALA, AACC, NACO, US Chamber, etc.)
8. Develop rules, stipulations and funding models for qualifying Local Non-Profits
9. Develop rules, stipulations, funding models and benchmarks for “For-Profit” Organizations (e.g. Public Utilities to incorporate smart grids, load control, load shedding, etc, Telemedicine to incorporate online services, remote patient care monitoring, etc.)
10. Approve qualified RFP’s from GSA’s and post on publically available BTOP / STATE website under “Bid Opportunities” including required timelines and benchmarks.
11. Disseminate funding in conjunction with Institutional and Local Private Sector Bond Issues and/or Equity Investment
12. Mapping of broadband deployments and backhaul to include GSA Coverage areas, Services by Local Governments, Public Utility Services, School System Services, Public Safety Services, Tourism & Hospitality Services, Destination Market Services, Portal/Marketing Services, Subscriber Costs, Demographics, etc.
13. Develop standardized reporting models and templates for GSA Public/Private Partnerships to download and work from to streamline reporting and transparency to BTOP and the States.

A majority of the ground level tasks and responsibilities will be handled by the Public/Private partnerships formed in which each network will reside. This process will reduce redundant and fraudulent applications, therefore streamlining the application and deployment processes, leading to faster job creation. This represents a fundamental improvement in overall proposed processes.

National Association of Counties

There are 3,141 counties and county equivalents in the 50 States and the District of Columbia. They are categorized as follows:

- 3,007 entities named “County”
- 16 Boroughs in Alaska
- 11 Census Areas in Alaska (for areas not organized into Boroughs by the State)
- 64 Parishes in Louisiana

42 Independent Cities (1 in Maryland, 1 in Missouri, 1 in Nevada, and the remainder in Virginia)
1 District - the Federal District or District of Columbia.

This does not include Commonwealths and territories with what are generally county equivalents, which are as follows:

Puerto Rico - 78 Municipios
U.S. Virgin Islands - 2 Districts
Guam - 19 Election Districts
Northern Mariana Islands - 17 Districts
American Samoa - 5 Districts

So in essence BTOP would have to process between 3,141 and 3,361 Public/Private partnership applications (GSA RFP's).

If BTOP were to hold back, let's say, \$2.2B for funding of other initiatives related to broadband initiatives (money for National organizations, non-profits, etc.), that leaves \$5B for GSA BTOP initiatives. On *average*, that equates to \$1.5M – \$1.6M for each GSA (County) for build out of *core* broadband wireless infrastructures in conjunction with private sector monies. Of course there would be formulas in place that would determine actual monies available for each Urban, Suburban and Rural GSA based on demographics, number of households, number of businesses, topography, potential market penetration and propagation, amount of private sector investment available, etc. for each GSA.

Private Sector Investment – Matching Funds for BTOP/NTIA/RUS

Preliminary discussions with large financial institutions and financial advisors have garnered much interest in bolstering investment in broadband wireless infrastructures. This additional matching \$7.2 Billion in funding will come in the form of bond issues and/or equity investment in broadband wireless deployments that would benefit Urban, Suburban and Rural markets and bring the total available funding to \$14.4 Billion.

The technology sector is continuing to gain strength in today's marketplace. Investors are looking to vehicles in this sector to invest trillions of dollars that have

been pulled from traditional real estate and other markets that were the standard of past investment strategies.

What would happen if a portion of this private sector money (\$7.2B) were to match NTIA/RUS monies for build out of broadband infrastructures that actually benefit ALL Americans, their Communities, Cities, Counties and that provided infrastructures that addressed the needs of Urban, Suburban and Rural markets?

It is also quite interesting that on Monday, March 23, 2009. the Secretary of Treasury Timothy Geithner and Obama announced plans for the formation of Public/Private partnerships to invest in programs designed to relieve the affect of toxic assets on the books of many financial institutions. This is fairly risky even though the Treasury department is backing the program. And it is the fact that Treasury is backing the program that introduces the most fundamental of risks... systemic failure.

There is no risk of systemic failure related to investment in Public/Private partnerships formed to improve upon broadband infrastructures which will lead to much improved quality of life and bolstering economic conditions. This is much more appealing.

It is the investment in County Urban and Suburban markets that has peaked interest of private sector investment and will offset investment in Rural markets. ROI on investment for core broadband services for Municipalities, Local Governments, Residential, Local Businesses, etc. will drive private sector investment and unleash much desired credit markets. Does it not make sense to build out these desired infrastructures as one initiative in Urban, Suburban and Rural markets?

Probably the most important aspect of this plan is that it prescribes ubiquitous and consistent broadband products and services for all markets. Conceivably under the current plan rural markets could receive much faster and better broadband service (new technology) than their Urban and Suburban counterparts. Then what?

The answer is users in Urban and Suburban markets are going to demand the same low cost higher speed ubiquitous broadband wireless services as their Rural counterparts. And as with most Rural markets local (W)ISP's will be providing the service with revenues generated remaining (being spent) within that local economy. Not true in existing Urban and Suburban markets... these monies

continue to exit these Communities lining the pockets of large incumbent service providers.

H.R. 760: 111th Congress

Advanced Broadband Infrastructure Bond Initiative of 2009

Advanced Broadband Infrastructure Bond Initiative of 2009 - Amends the Internal Revenue Code to allow a tax credit for investment in qualified advanced broadband infrastructure bonds. Limits the issuance authority for such bonds in 2009, 2010 and 2011 to \$1 billion for state and local government issuers and \$10 billion for all other issuers. Requires the use of bond proceeds to finance broadband infrastructure projects to provide residential or small business consumers with high-speed access to the Internet.

Amends the National Telecommunications and Information Administration Organization Act to require the National Telecommunications and Information Administration in the Department of Commerce to: (1) approve requests for qualified advanced broadband infrastructure projects; (2) monitor the implementation of such projects; and (3) make determinations regarding increases in the transmission speed requirements of the advanced broadband infrastructure bond program. (<http://www.opencongress.org/bill/111-h760/text>)

Investment Models

Urban and Suburban markets would follow a different set of funding criteria than Rural markets based on GSA demographics, number of households, number of businesses, topography/geography, potential market penetration and subscriber base, propagation studies, etc.

Private sector investment in Rural markets can follow the proposed “20% rule” as introduced by BTOP.

Job Creation – Rural vs. Urban, Suburban *and* Rural

Deploying Municipal, Community, City or County Wide networks in fixed and nomadic configurations for Urban, Suburban and Rural markets will exponentially create and sustain more jobs than just addressing just Rural markets. Qualified service providers and the local Public/Private partnerships will have to hire more

technicians, sales/marketing, customer service personnel to manage and operate the network. In addition, municipal employees can move laterally and become trained in newer technologies benefiting municipal departmental applications.

The 3.65GHz WiMAX Consortium

The 3.65GHz WiMAX Consortium will consist of qualified Service Providers ((W)ISP's) and Equipment Manufacturers in the 3.65GHz, 5.8GHz, 4.9GHz, and other spectrums that adhere to specific operating and revenue models as determined by the NTIA, RUS, the new FCC and the 3.65GHz WiMAX Consortium in conjunction with programs that will be introduced by BTOP and by the overall Economic Stimulus Package (ARRA).

The Consortium will provide a one-stop-shop for any qualified Public/Private partnership, Integrator, VAR, or Service Provider ((W)ISP) to obtain turn key product and services to launch high speed broadband wireless within their geographical service area (GSA). The Consortium will also assist in the formation of Public/Private partnerships in accordance with standards set forth by the NTIA, RUS, and the FCC in conjunction with local organizations.

The Consortium has already established relationships with major U.S. WiMAX equipment manufacturers such as AirSpan, Alvarion, Aperto, RedLine and SolecTek (and others) and can assist integrators and service providers in determining the best hardware configurations to deploy based upon topography, demographics, size of the geographical service area and overall needs of the constituency for which the network will be launched, covering all Urban, Suburban and Rural markets.

Summary of BTOP Public Meetings

The public meetings hosted by NTIA and RUS represented a great process in the gathering of unique and differentiating ideas and concepts from public input. Numerous associations, service providers, IT managers, CIO's, and lobbyist's posed comments and questions to a diverse group of panelist's over the two week period.

The positives far out weigh the negatives and here is a summary of both.

The Positives

All of the roundtable/panel discussions were very informative and there was a consistent theme that was voiced by moderators, panelists, audience members and webinar participants. This theme was centered around “what is best for the American people”... not Rural markets, not Rural ISP’s, not National Organizations, but the American people.

As a result of this premise it was evident during the meetings that broadband services affect everyone’s lives. It has changed the way we communicate, conduct business, obtain information, buy and sell, and interact socially.

The NTIA and RUS should build off of this public exclamation and not only address underserved, unserved, vulnerable or rural populations but the needs of all American people and businesses. It is extremely short sighted to take a small market segment, throw money at it, and hope to solve the problem. And in doing this it will anger other market segments that have been vulnerable to large incumbent Telecom and Cable companies business practices and will be receiving inferior service to what will be offered to “vulnerable” populations.

It is inevitable that these “under served” markets will have the broadband services that they need in the future just through the natural evolution of technology and services and the quickened pace of deployment of these technologies over the last decade. What the NTIA and RUS can do at this point is look at the big picture and develop sustainable programs that address the needs of Urban, Suburban *and* Rural markets right now, enabling lateral growth within the next decade and decades to come.

It is also evident from these meetings that the American people are demanding broadband services that improve quality of life and applications that are sensible. More specifically, TeleMedicine, Department of Energy Smart Grids/Load Control, Remote Monitoring and Reporting Applications, Home Based Power Stations, Distance Learning, etc.

All of these applications can only be supported and sustained through public education and implementation in all Urban, Suburban and Rural markets. Low

cost, high speed fixed, nomadic and mobile broadband wireless will play an integral role.

The Negatives

In many instances moderators, audience members, teleconference and web participants posed comments and questions that were unable to be addressed simply because the answers were unknown at that point... which is fine. This is the reason that the NTIA and RUS initiated these public meetings.

Many of the unanswered comments and questions were due to the noticeably *absent* representatives from the FCC. As outlined previously in this summary “acting” FCC Chair Michael Copps made his opening remarks at the first March 16 meeting, which basically voiced what the American people and constituents within the audience/web broadcast wanted to hear, but were totally contradictory related to past FCC rule changes and actions that truly affected the future of broadband within the United States. He was also part of this decision making process.

A good example of this contradictory behavior was the unanimous vote by the FCC and Congress to approve the 2.5GHz spectrum consolidation between Sprint and Clearwire that was confirmed on Election Day 2008 (see [history](#)). Knowing that the new White House administration was going to address broadband initiatives, and shake things up at the FCC, this was the final blow by Kevin Martin to make his mark and push his own agenda in the support of large incumbent Telecom and Cable companies.

And during this two week Q&A the NTIA and RUS made many references that pertained to “working with the FCC” so it will be interesting to monitor that progress especially based upon past FCC rule changes and decisions that will affect every American and the way we communicate and conduct business.

The questions here are:

“Why had the new FCC Administration not taken office prior to these discussions?” “Where is Julius Genachowski?” (Appointed as new FCC Chairman by President Obama)

“What are the goals of the new FCC Administration and how will they fix past Administrations mismanagement?”

It seems that the FCC has been given a pass with large incumbent Telecom and Cable companies latched onto their coat tails and is probably intentional based upon their lack of presence during these meetings.

One other potentially cumbersome undertaking that presented during these meetings are the undaunted tasks of the NTIA and RUS to deal with the overwhelming number of applications and funding requests anticipated from the thousands of potential applicants that will be lining up to receive funding from BTOP. If the NTIA and RUS plan on following the application and subsequently flawed processes of the past we will all be in for a nightmare.

There are too many “national” associations, non-profits and for-profit organizations that will be requesting monies from NTIA and RUS and it will be next to impossible to monitor and provide the transparency desired if the NTIA and RUS are to funnel down funding through these organizations. That is not to say that these organizations are not pivotal to driving successful and sustainable broadband initiatives but their role needs to be limited. The applications and request for monies need to come from the ground up rather than from the top down or else there will be too many “hands in the till”.

While all the sessions were informative let us focus on one session that stood out and offered unique perspectives as to what BTOP will be facing.

Session 3 - Innovative Programs to Encourage Sustainable Adoption of Broadband Service and Expanding Public Computer Center Capacity

<http://www.ntia.doc.gov/broadbandgrants/meetings.html>

The panelists were:

- Jonathan D. Linkous, CEO, American Telemedicine Association
- Emily Sheketoff, Executive Director, Washington Office, American Library Association
- Jim Hermes, Senior Legislative Associate, American Association for Community Colleges
- Erin Duncan, Federal Lobbyist, National Education Association

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Submitted by:

Brad Bowman • Program Director • AccessDelray.org • 561.252.4764
<http://www.AccessDelray.org> • bbowman@accessdelray.org

- Hank Kenchington, Deputy Assistant Secretary for Research and Development, Office of Electricity Delivery and Energy Reliability, US Department of Energy
- Jason Goldrnan, Counsel, Telecommunications & E-Commerce, US Chamber of Commerce
- Rey Ramsey, Chairman and CEO, One Economy, Corp.

This is quite a diverse group and this session was more spirited than others. This session was also very distinguishing because of the Organizations represented and their potential roles in fulfilling BTOP initiatives. Two of these Organizations were represented by a Lobbyist and a “Senior Legislative Associate” (Lobbyist)... the rest by more credible representatives that offered true and concise direction for BTOP. This is symbolic of what the NTIA and RUS are up against in allocating grants and loans that best suit the needs of the American people in Urban, Suburban and Rural markets. The role of GSA Public/Private partnerships will greatly reduce the burden placed upon the NTIA and RUS in determining the needs of each GSA market.

American Telemedicine Association

Needs: – Video based conferencing between health clinics and the home, two-way communication of patient wearable monitors, monitoring of ICU’s by remote specialists, short term leasing of equipment and services due to changing technologies, coordinating functions between health care providers, service providers, ISP’s, ONC, HRSA and review teams to offer best quality of care.

Proposed ATA Solution: Coordination of functions between health care providers, service providers, ISP’s, ONC, HRSA and review teams to offer best quality of care. Has numerous funding resources through existing ARRA Health Care programs.

Summary: Presented very unique and differentiating applications that should be available to every citizen that needs them. Addressed reduce cost modeling, convenience, increases in productivity. With proper public education, Telemedicine capabilities and applications will be a part of our daily lives, for those that need it. This involves participation of every level of Urban, Suburban and Rural Communities.

Overall Rating: ***** (4 of 5)

Direct BTOP Funding: Needs to be coordinated with Department of Health and Human Services, Office of National Coordination for Health and Information Technology (ONC), the Health Resources Services Administration (HRSA), and local Health Officials part of the GSA Public/Private partnerships.

The American Library Association

Needs: Higher bandwidth (speeds), increased computer capacity, driving traffic.**Proposed ALA Solution:** “Fiber to the Library”

Summary: While increased speeds are a necessity for Libraries it is also a necessity for all American households and businesses. Fiber will definitely become an instrument for backhaul supporting new GSA broadband wireless infrastructures, but will be used to benefit each community as a whole. Libraries will fall under basic or enhanced “Business Class” broadband services to accommodate their bandwidth needs.

As for computer capacity, there are seven (7, listed on the ALA website) other ARRA programs (besides BTOP) that can address actual computer center improvements and hardware needs. BTOP is responsible for “broadband”, not hardware and additions to existing edifices

What Public Libraries need are programs to drive traffic to their facilities. This will be accomplished by overall GSA Public/Private partnership initiatives, of which local Library constituents will be a part and encouraging local (and national) distance learning and employer outreach programs and other programs autonomous to their local community outreach.

Overall Rating: *** (3 of 5)

Direct BTOP Funding: Administration, monitoring, transparency only. Majority of available funding should go to local GSA Public/Private partnership broadband initiatives.

American Association for Community Colleges

Needs: (Same as ALA) Higher bandwidth, increased computer center capacity, driving traffic

Proposed AACC Solution: Using broadband as a value-added approach to spur economic growth, growth of local businesses, distance education linked to high speed inter-state networks and research intuitions.

Summary: As with the ALA, the AACC needs encompass the desires of each community as a whole. Spurring broadband growth within Urban, Suburban and Rural markets is a given. This will be accomplished by establishing GSA Public/Private partnerships, of which Community Colleges, School Boards, etc. will be a part of.

Overall Rating: ** (2 of 5)

Direct BTOP Funding: Administration, monitoring, transparency only. Majority of available funding should go to local GSA Public/Private partnership broadband initiatives.

The National Education Association

Needs: "Connect as many schools and communities as possible"

Proposed NEA Solution: 10MB/Sec access to (W)ISP per 1000 students and staff, 100MB/Sec inter-connectivity between School Systems.

Summary: This presentation was embarrassing. This Lobbyist had nothing to contribute and was basically a waste of space on a very diverse panel. For such a large organization it was very surprising to have a Lobbyist representing their constituency. Again, GSA Public/Private partnerships will address the needs of their School Systems and can report directly to the NEA. One thing that this representative failed to mention was the fact that each student or staff member can take their ubiquitous high speed broadband wireless access account with them from home to school and vice versa.

Overall Rating: * (1 of 5)

Direct BTOP Funding: Administration, monitoring, transparency only. Majority of available funding should go to local GSA Public/Private partnership broadband initiatives.

US Department of Energy

Needs: Public education/incentives, smart grid technologies, peak demand/load control, load shedding, local (home) storage of energy, two-way communications (home to grid), time-of-use pricing schedules, management of loads to accommodate plug-in hybrid vehicles.

Proposed DOE Solution: The DOE has \$4.5B from ARRA programs (separate from BTOP) to improve upon and implement their needs.

Summary: This Representative was right on top of things to come. Smart grids, peak load control and shedding, selling and using power stored at the home, and efficient use of assets... all of which will require two-way

communication (Fixed Broadband Wireless) from the home (or business) back to the grid or application services provided by Electric Utilities. BTOP should explore broadband/energy rebate scheduling for homeowners and energy tax credits for service providers participating in these programs.

Overall Rating: **** (4 of 5)

Direct BTOP Funding: Coordination with State Energy Offices and possible matching funds, broadband rebate scheduling, broadband tax credits, and fixed broadband wireless to the home.

U.S. Chamber of Commerce

Needs: – NTIA and RUS to address the needs of all the American people and the need for broadband initiatives that bring about the greatest economic impact.

Proposed USCC Solution: “Establishment of Public/Private partnerships that leverage resources within and across every community for effective technology expansion”.

Summary: Broadband to expand and transform every sector of the U.S. economy. Basically reiterated the needs for sustainable broadband adoption at the County and Local levels to bolster economic growth.

Overall Rating: *** (3 of 5)

Direct BTOP Funding: Administration, monitoring, transparency only. Majority of available funding should go to local GSA Public/Private partnership broadband initiatives of which Local Chambers of Commerce will be a part.

One Economy Corporation

Needs: Creating a “culture of use” to improve lives. Making sure that technologies are “available, affordable, and adopted (the three A’s)” to all Americans, Affordable Housing Contractors to incorporate network infrastructure access into new construction.

Proposed OEC Solution: Public awareness and education, affordable internet access & hardware, relevant content, maximize impact for low-income, poverty level households.

Summary: Leader in providing Digital Access, Inclusion and Literacy for low-income, poverty level households within the U.S. and around the World. The most important “meter” in gauging sustainable broadband adoption is in the home. Affordable housing contractors need to incorporate networked

applications. Emphasized using technology to improve the social and economic aspects of everyone's lives and transcending the barriers of the 21st century by reversing trends, reduced crime, leading to better socio-economic scales.

Overall rating: ***** (5 of 5)

Direct BTOP Funding: BTOP should make every effort to support organizations like One-Economy and establish specific funding programs that directly incentivize service provider implementation of these programs. This will have a positive affect on communities as a whole. BTOP could use additional broadband provider tax credits or outline revenue share incentives to provide for sustainable Digital Access, Inclusion & Literacy programs for low-income, impoverished individuals and households.

Document Conclusion

As we migrate to 21st century technologies the American people and the World are going to demand low cost, high bandwidth intensive services that will task all spectral assets available.

When one looks at the expense that most Americans (most expensive in the World thanks to large incumbents) are racking up month after month for communications and internet access it boggles the mind. Average American households and workers pay for their home phone (land line), cell phones, cable TV, home internet access, and supplementary or enhanced peripherals or packages on top of those services. These are services that most families and households cannot do without and yet they find a way, even during this economic downturn, to maintain and pay for these services.

And where is this money going? It is not flowing back to the communities in which they live and work. It is going to line the pockets of large incumbent Telecom's and Cable Companies. And this will continue if change does not occur.

And how are other Nations topping the U.S.? Better spectrum management.

Local Governments, Cities or Counties, through local Public/Private partnerships, deserve the right to provide **core** communications and internet services for their Citizens and Businesses in all Urban, Suburban and Rural markets, much like they

provide water, sewer and garbage pickup, and receive revenue and profits from such services.

These are **core** services and if modeled correctly will not affect large incumbent's bottom line and their responsibilities to stock holders.

The NTIA, RUS and the FCC need to pull resources and identify and deploy new broadband wireless infrastructures and determine methodologies that will benefit all Americans, our Businesses, Local Governments, Cities, Counties, Health Care, Public Safety, School Systems and Low-Income (vulnerable) Households in all Urban, Suburban and Rural markets. This is where the BTOP monies should be concentrated. There is absolutely no reason for two different agencies to manage BTOP monies as this will only lead to flawed, redundant, and fraudulent application processes.

The formation of local Public/Private partnerships, from the get go, will align all other processes and provide for expedient roll out of advanced broadband infrastructures within the United States.

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DIRECT RESPONSES TO NTIA, RUS BTOP INITIATIVES / QUESTIONS (Responses in RED) (GSA = Geographical Service Area)

1. The Purposes of the Grant Program: Section 6001 of the Recovery Act establishes five purposes for the BTOP grant program.\2\

\2\ Section 6001(b) states that the purposes of the program are to--

(1) Provide access to broadband service to consumers residing in unserved areas of the United States; 3.65GHz, 5.8GHz, 4.9GHz wireless, with Fiber backhaul, should be used for Suburban, Urban, **and** Rural markets.

(2) Provide improved access to broadband service to consumers residing in underserved areas of the United States; 3.65GHz, 5.8GHz, 4.9GHz wireless, with Fiber backhaul, should be used for Suburban, Urban, **and** Rural markets.

Current Rural Broadband Usage Statistics Based on Current FCC Broadband Definitions

Location		Farms in 2007	# Using The Internet	Use of High Speed Internet				Range Among the Counties	
				#	%	% (Below) or Above US Average		Lo	Hi
CT	8	4,916	3,170	2,579	52.5%	59.3%		72.7%	88.8%
MA	12	7,670	5,146	3,820	49.8%	51.2%		46.6%	89.0%
RI	5	1,219	798	606	49.7%	50.9%		72.4%	89.6%
NJ	18	10,299	6,476	5,009	48.6%	47.6%		58.9%	86.6%
AK	3	614	450	297	48.4%	46.8%		56.0%	75.4%
CO	55	36,846	25,689	17,654	47.9%	45.5%		49.5%	90.9%
NH	10	4,166	3,063	1,941	46.6%	41.4%		22.9%	78.8%
CA	56	81,020	53,729	35,271	43.5%	32.2%		13.3%	87.8%
NV	14	3,086	2,090	1,332	43.2%	31.0%		42.4%	76.1%
OR	36	38,553	27,623	16,634	43.1%	31.0%		36.4%	83.1%
WA	39	39,284	27,265	16,787	42.7%	29.7%		39.4%	85.2%
WY	23	11,069	7,289	4,720	42.6%	29.5%		48.7%	85.0%
ND	53	31,970	19,526	13,465	42.1%	27.9%		49.8%	85.3%
HI	4	7,521	4,197	3,158	42.0%	27.5%		71.1%	85.9%
NE	93	47,712	30,073	19,975	41.9%	27.1%		38.9%	88.6%
SD	66	31,169	19,907	12,828	41.2%	24.9%		44.5%	80.9%
UT	28	16,652	9,764	6,828	41.0%	24.5%		45.8%	79.8%
ID	43	25,310	16,681	10,102	39.9%	21.2%		32.6%	82.8%
IA	99	92,856	58,087	36,194	39.0%	18.3%		40.3%	79.6%
ME	16	8,136	5,335	3,093	38.0%	15.4%		29.4%	80.3%
MT	56	29,524	18,484	11,084	37.5%	14.0%		36.8%	78.2%
KS	105	65,531	37,413	24,457	37.3%	13.3%		40.5%	91.4%
MN	84	80,915	49,923	30,002	37.1%	12.6%		31.8%	81.1%
FL	65	47,425	26,452	17,401	36.7%	11.4%		33.9%	88.7%
NY	55	36,291	22,711	13,150	36.2%	10.0%		34.5%	87.8%
VT	14	6,984	4,627	2,521	36.1%	9.6%		27.1%	74.7%
GA	153	47,637	25,169	17,149	36.0%	9.3%		24.4%	94.7%
IL	102	76,860	46,069	26,967	35.1%	6.5%		33.9%	86.2%
NC	99	52,906	28,306	18,238	34.5%	4.7%		36.8%	86.3%
MD	23	12,834	7,869	4,337	33.8%	2.6%		36.7%	72.5%
OH	88	75,861	43,852	23,785	31.4%	-4.8%		21.5%	83.0%
TX	251	247,366	129,759	73,505	29.7%	-9.8%		31.7%	89.4%
AR	75	49,346	25,667	14,631	29.6%	-10.0%		30.6%	81.0%
NM	32	20,923	10,015	6,176	29.5%	-10.4%		40.2%	78.3%
WI	71	78,459	45,177	22,894	29.2%	-11.4%		31.1%	69.9%
LA	61	30,028	14,704	8,751	29.1%	-11.5%		25.0%	91.7%
KY	116	85,135	43,070	24,785	29.1%	-11.6%		27.6%	88.1%
OK	77	86,565	45,923	25,168	29.1%	-11.7%		35.4%	84.4%
PA	65	63,112	32,209	18,231	28.9%	-12.3%		20.4%	92.2%
SC	46	25,867	12,344	7,326	28.3%	-14.0%		30.0%	81.2%
IN	92	60,938	34,489	17,114	28.1%	-14.7%		23.0%	71.2%
DE	3	2,546	1,499	713	28.0%	-15.0%		43.1%	65.4%
AL	67	48,753	24,457	13,524	27.7%	-15.8%		33.3%	83.0%
TN	95	79,280	39,426	21,508	27.1%	-17.6%		27.4%	79.4%
AZ	15	15,637	6,266	4,208	26.9%	-18.3%		45.2%	80.5%
MI	79	55,884	32,887	14,854	26.6%	-19.3%		15.4%	75.0%
VA	96	47,332	25,461	12,041	25.4%	-22.8%		17.6%	84.2%
MO	114	107,825	55,844	25,692	23.8%	-27.7%		18.1%	76.7%
WV	50	23,473	10,964	5,009	21.3%	-35.2%		17.8%	73.0%
MS	82	41,959	18,405	8,608	20.5%	-37.7%		26.1%	73.5%
3,012		2,203,264	1,245,799	726,122	33.0%	0%		13.3%	94.7%

Note:

Analysis excludes 23 AK counties, 37 VA Independent Cities, and 1 county each from CO and HI with No Farms.
 Plus, 62 counties with fewer than 50 farms are also excluded.

Source: http://www.dailyyonder.com/files/imagecache/story_default/imagefield/StatesInternet.jpg

(3) provide broadband education, awareness, training, access, equipment, and support to--

(A) Schools, libraries, medical and healthcare providers, community colleges, and other institutions of higher education, and other community support organizations and entities to facilitate greater use of broadband service by or through these organizations; 3.65GHz, 5.8GHz, 4.9GHz, wireless interoperability between networks and systems.

(B) organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations; 3.65GHz, 5.8GHz, and 2.4GHz, [One-Economy Corp](#), other qualifying non-profits and;

(C) job-creating strategic facilities located within a State-designated economic zone, Economic Development District designated by the Department of Commerce, Renewal Community or Empowerment Zone designated by the Department of Housing and Urban Development, or Enterprise Community designated by the Department of Agriculture; Retail and Skills Training Centers through various non-profits, employer outreach programs, distance learning

(4) improve access to, and use, of broadband service by public safety agencies; a plethora of products and services, iCop, remote camera and DVR access, etc. and

(5) stimulate the demand for broadband, economic growth, and job creation. Local employer outreach, distance learning and training, through ubiquitous wireless communications and internet access, [One-Economy's products/services Resources](#)

a. Should a certain percentage of grant funds be apportioned to each category? Yes

b. Should applicants be encouraged to address more than one purpose? GSA Public / Private Partnerships, Yes

c. How should the BTOP leverage or respond to the other broadband-related portions of the Recovery Act, including the United States Department of Agriculture (USDA) grants and loans program as well as the portions of the Recovery Act that address smart grids, health

information technology, education, and transportation infrastructure?

All should be combined and re-allocated based on newer wireless technologies providing ubiquitous core communications and internet access

2. The Role of the States: The Recovery Act states that NTIA may consult the States (including the District of Columbia, territories, and possessions) with respect to various aspects of the BTOP.\3\ The Recovery Act also requires that, to the extent practical, the BTOP award at least one grant to every State.\4\ NO... another hand in the till. States can oversee and register GSA public/private partnerships for each deployment within the State.

\3\ Section 6001(c) states that the Assistant Secretary may consult a State, the District of Columbia, or territory or possession of the United States with respect to--

(1) The identification of areas described in subsection (b)(1) or (2) located in that State; YES and

(2) the allocation of grant funds within that State for projects in or affecting the State. Federal Funds not allocated to States for deployment, but to established and qualifying public/private partnerships within Counties. Funds to States should be used to setup oversight of local Public/Private partnerships.

\4\ Section 6001(h)(1).

a. How should the grant program consider State priorities in awarding grants? States can present reports/documentation from the established and qualifying public/private partnerships

b. What is the appropriate role for States in selecting projects for funding? Once Community, City or County Public/Private partnership is qualified and established, States can document and oversee the projects and report to BTOP.

c. How should NTIA resolve differences among groups or constituencies within a State in establishing priorities for funding? This will be established through the registration of qualified and established GSA public/private partnerships within a State City or County (or specified geographical service area)

d. How should NTIA ensure that projects proposed by States are

well-executed and produce worthwhile and measurable results? **Each public/private partnership will be responsible for reporting revenues, program benefits, community outreach programs addressed, public safety initiatives, etc.**

3. Eligible Grant Recipients: The Recovery Act establishes entities that are eligible for a grant under the program.\5\ The Recovery Act requires NTIA to determine by rule whether it is in the public interest that entities other than those listed in Section 6001(e)(1)(A) and (B) should be eligible for grant awards. What standard should NTIA apply to determine whether it is in the public interest that entities other than those described in Section 6001(e)(1)(A) and (B) should be eligible for grant awards? **Established and qualifying GSA public/private partnerships**

\5\ Section 6001(e) states that eligible applicants shall--

(1)(A) Be a State or political subdivision thereof, the District of Columbia, a territory or possession of the United States, an Indian tribe (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450(b)) or native Hawaiian organization;

(B) a nonprofit--

(i) foundation,

(ii) corporation,

(iii) institution, or

(iv) association; or

(C) any other entity, including a broadband service or infrastructure provider, that the Assistant Secretary finds by rule to be in the public interest. In establishing such rule, the Assistant Secretary shall to the extent practicable promote the purposes of this section in a technologically neutral manner. **Established and qualifying public/private partnerships with all the local representatives above (Bi,ii,iii,iv,C) participating along with key stake holders within each GSA (geographical service area)**

4. Establishing Selection Criteria for Grant Awards: The Recovery Act establishes several considerations for awarding grants under the BTOP.\6\ In addition to these considerations, NTIA may consider other priorities in selecting competitive grants.

\6\ Section 6001(h) states that NTIA, in awarding grants, shall, to the extent practical--

(2) Consider whether an application to deploy infrastructure in an area--

a. Will, if approved, increase the affordability of, and subscribership to, service to the greatest population of users in the area; **Urban, Suburban, and Rural markets through fixed, nomadic 3.65GHz, 5.8GHz, 4.9GHz, 2.4GHz**

b. will, if approved, provide the greatest broadband speed possible to the greatest population of users in the area; **Urban, Suburban, and Rural markets through fixed, nomadic 3.65GHz, 5.8GHz, 4.9GHz, 2.4GHz**

c. will, if approved, enhance service for health care delivery, education, or children to the greatest population of users in the area; **Urban, Suburban, and Rural markets through fixed, nomadic 3.65GHz, 5.8GHz, 4.9GHz, 2.4GHz** and

d. will, if approved, not result in unjust enrichment as a result of support for non-recurring costs through another Federal program for service in the area; **multiple CWA qualifying WISP's**

(3) consider whether the applicant is a socially and economically disadvantaged small business concern as defined under section 8(a) of the Small Business Act (15 U.S.C. 637). **Accomplished through established and qualifying public/private partnerships**

a. What factors should NTIA consider in establishing selection criteria for grant awards? How can NTIA determine that a Federal funding need exists and that private investment is not displaced? How should the long-term feasibility of the investment be judged? **Both federal stimulus money and private sector investment will be managed by the financial arm of the public/private partnership in conjunction with advisors from the private sector investment**

b. What should the weighting of these criteria be in determining consideration for grant and loan awards? **County demographic(s), topography, number of households, businesses within the GSA.**

c. How should the BTOP prioritize proposals that serve underserved or unserved areas? Should the BTOP consider USDA broadband grant awards and loans in establishing these priorities? **NO prioritization. All applications for Grants should be approved from established and qualifying public/private partnerships.**

d. Should priority be given to proposals that leverage other

Recovery Act projects? **YES. And this will be borne of the proposals from the public/private partnerships.**

e. Should priority be given to proposals that address several purposes, serve several of the populations identified in the Recovery Act, or provide service to different types of areas?

YES. And this will be borne of the proposals from the public/private partnerships.

f. What factors should be given priority in determining whether proposals will encourage sustainable adoption of broadband service?

Where a percentage of profits (TBD) from revenue for core communications and internet access are allocated

g. Should the fact that different technologies can provide different service characteristics, such as speed and use of dedicated or shared links, be considered given the statute's direction that, to the extent practicable, the purposes of the statute should be promoted in a technologically neutral fashion? **Statute should only address high speed core communications and internet access. Let the large incumbents worry about enhanced services and applications**

h. What role, if any, should retail price play in the grant program? **Just as municipalities, Cities or Counties provide garbage, sewer and water services, a low cost, high speed core infrastructure is able to be subscribed to through the public/private partnership within each GSA.**

5. Grant Mechanics: The Recovery Act requires all agencies to distribute funds efficiently and fund projects that would not receive investment otherwise.

a. What mechanisms for distributing stimulus funds should be used by NTIA and USDA in addition to traditional grant and loan programs?

Accomplished through established and qualifying GSA public/private partnerships

b. How would these mechanisms address shortcomings, if any, in traditional grant or loan mechanisms in the context of the Recovery Act? **Better policing, less mis-management of funds, Accomplished through established and qualifying GSA public/private partnerships**

6. Grants for Expanding Public Computer Center Capacity: The Recovery Act directs that not less than \$200,000,000 of the BTOP shall be awarded for grants that expand public computer center capacity,

including at community colleges and public libraries.

a. What selection criteria should be applied to ensure the success of this aspect of the program? **Accomplished through established and qualifying GSA public/private partnerships and determination of retrofit or new Skills Training Centers/Employer Outreach Programs of which is funded from profits (% TBD) from core communications and internet access revenues.**

b. What additional institutions other than community colleges and public libraries should be considered as eligible recipients under this program? **Accomplished through established and qualifying public/private partnerships and determination of retrofit or new Skills Training Centers/Employer Outreach Programs of which is funded from profits (% TBD) from core communications and internet access revenues. Digital Access, Inclusion & Literacy for low-income, poverty level households.**

7. Grants for Innovative Programs to Encourage Sustainable Adoption of Broadband Service: The Recovery Act directs that not less than \$250,000,000 of the BTOP shall be awarded for grants for innovative programs to encourage sustainable adoption of broadband services.

a. What selection criteria should be applied to ensure the success of this program? **Based on projected revenues/profit sharing (%TBD) within a given GSA**

b. What measures should be used to determine whether such innovative programs have succeeded in creating sustainable adoption of broadband services? **Reporting and Transparency reported to States from established and qualifying GSA public/private partnerships.**

8. Broadband Mapping: The Recovery Act directs NTIA to establish a comprehensive nationwide inventory map of existing broadband service capability and availability in the United States that depicts the geographic extent to which broadband service capability is deployed and available from a commercial provider or public provider throughout each State.\7\

\7\ Section 6001(I).

a. What uses should such a map be capable of serving? **GSA Coverage areas, Services by Local Governments, public utility services, school system services, tourism services, destination market services, hospitality services, costs, etc.**

- b. What specific information should the broadband map contain, and should the map provide different types of information to different users (e.g., consumers versus governmental entities)? **GSA Coverage areas, Services by Local Governments, public utility services, school system services, tourism services, destination market services, hospitality services, costs, etc.**
- c. At what level of geographic or other granularity should the broadband map provide information on broadband service? **GSA coverage areas based upon topography**
- d. What other factors should NTIA take into consideration in fulfilling the requirements of the Broadband Data Improvement Act, Public Law 110-385 (2008)? **TBD**
- e. Are there State or other mapping programs that provide models for the statewide inventory grants? **Many software vendors can provide such services but should be integrated on a national grid as well as through local GSA core communications and internet access portals. GSA coverage data should be made publically available and allow advertising driven application providers and VAR's design and implement nationwide and local mapping. (This is going to happen anyway) This budget is overkill and these monies should be used elsewhere.**
- f. Specifically what information should states collect as conditions of receiving statewide inventory grants? **Registered GSA public/private partnerships.**
- g. What technical specifications should be required of State grantees to ensure that statewide inventory maps can be efficiently rolled up into a searchable national broadband database to be made available on NTIA's Web site no later than February 2011? **TBD**
- h. Should other conditions attach to statewide inventory grants? **NO**
- i. What information, other than statewide inventory information, should populate the comprehensive nationwide map? **GSA Coverage areas, Services by Local Governments, public utility services, school system services, tourism services, destination market services, hospitality services, subscription plans, etc.**
- j. The Recovery Act and the Broadband Data Improvement Act (BDIA) imposes duties on both NTIA and FCC concerning the collection of broadband data. Given the statutory requirements of the Recovery Act and the BDIA, how should NTIA and FCC best work together to meet these

requirements? **The FCC needs a serious re-vamp as they have their own agenda. Hopefully the new FCC admin will grasp reality and realize the mismanagement of Kevin Martin & CO.**

9. Financial Contributions by Grant Applicants: The Recovery Act requires that the Federal share of funding for any proposal may not exceed 80 percent of the total grant.\8\ The Recovery Act also requires that applicants demonstrate that their proposals would not have been implemented during the grant period without Federal assistance.\9\ The Recovery Act allows for an increase in the Federal share beyond 80 percent if the applicant petitions NTIA and demonstrates financial need.

\8\ Section 6001(f).

\9\ Section 6001(e)(3).

a. What factors should an applicant show to establish the ``financial need" necessary to receive more than 80 percent of a project's cost in grant funds? **No urban or suburban applicant should receive more than %TBD in conjunction with private sector investment and ROI while rural applicants can receive up to, but no more than 80% funding from federal stimulus monies. Private sector monies are ready and willing to match the \$7.2B offered BTOP through the ARRA to cover Urban, Suburban *and* Rural markets.**

b. What factors should the NTIA apply in deciding that a particular proposal should receive less than an 80 percent Federal share?

Private sector investment and ROI models

c. What showing should be necessary to demonstrate that the proposal would not have been implemented without Federal assistance?

Private Sector Investment

10. Timely Completion of Proposals: The Recovery Act states that NTIA shall establish the BTOP as expeditiously as practicable, ensure that all awards are made before the end of fiscal year 2010, and seek assurances from grantees that projects supported by the programs will be substantially completed within two (2) years following an award.\10\ The Recovery Act also requires that grant recipients report quarterly

on the recipient's use of grant funds and the grant recipient's progress in fulfilling the objectives of the grant proposal.\11\ The Recovery Act permits NTIA to de-obligate awards to grant recipients that demonstrate an insufficient level of performance, or wasteful or fraudulent spending (as defined by NTIA in advance), and award these funds to new or existing applicants.\12\

\10\ Section 6001(d).

\11\ Section 6001(i)(1).

\12\ Section 6001(i)(4).

a. What is the most efficient, effective, and fair way to carry out the requirement that the BTOP be established expeditiously and that awards be made before the end of fiscal year 2010? **NTIA, RUS and FCC should put memorandums out to City and County GSA's, Local Governments, Chamber's of Commerce for dissemination within the Communities to establish qualifying GSA public/private partnerships. Accomplished through NACo.**

b. What elements should be included in the application to ensure the projects can be completed within two (2) years (e.g., timelines, milestones, letters of agreement with partners)? **Establishment of qualifying GSA public/private partnerships within 2 months, establishment of qualifying equipment manufacturers and service providers within 2 – 4 months with ongoing upgrades to list. Easily done.**

11. Reporting and Deobligation: The Recovery Act also requires that grant recipients report quarterly on the recipient's use of grant funds and progress in fulfilling the objectives of the grant proposal.\13\ The Recovery Act permits NTIA to de-obligate funds for grant awards that demonstrate an insufficient level of performance, or wasteful or fraudulent spending (as defined by NTIA in advance), and award these funds to new or existing applicants.\14\

\13\ Section 6001(i)(1).

\14\ Section 6001(i)(4).

a. How should NTIA define wasteful or fraudulent spending for purposes of the grant program? **State and Federal Monitoring of GSA Public/Private Partnerships**

b. How should NTIA determine that performance is at an

``insufficient level? Based on reports from established and qualifying public/private partnerships in relation to proportional demographics, population, households, businesses, etc.

c. If such spending is detected, what actions should NTIA take to ensure effective use of investments made and remaining funding? **Oversight committee policing the GSA public/private partnerships should step in**

12. Coordination with USDA's Broadband Grant Program: The Recovery Act directs USDA's Rural Development Office to distribute \$2.5 billion dollars in loans, loan guarantees, and grants for broadband deployment. The stated focus of the USDA's program is economic development in rural areas. NTIA has broad authority in its grant program to award grants throughout the United States. Although the two programs have different statutory structures, the programs have many similar purposes, namely the promotion of economic development based on deployment of broadband service and technologies.

a. What specific programmatic elements should both agencies adopt to ensure that grant funds are utilized in the most effective and efficient manner? **Accomplished through established and qualifying public/private partnerships**

b. In cases where proposals encompass both rural and non-rural areas, what programmatic elements should the agencies establish to ensure that worthy projects are funded by one or both programs in the most cost effective manner without unjustly enriching the applicant(s)? **Accomplished through established and qualifying public/private partnerships**

13. Definitions: The Conference Report on the Recovery Act states that NTIA should consult with the FCC on defining the terms ``unserved area," ``underserved area," and ``broadband." \15\ The Recovery Act also requires that NTIA shall, in coordination with the FCC, publish nondiscrimination and network interconnection obligations that shall be contractual conditions of grant awards, including, at a minimum, adherence to the principles contained in the FCC's broadband policy statement (FCC 05-15, adopted August 5, 2005).\16\

\15\ H.R. Rep. No. 111-16, at 776 (2009) (Conf. Rep.).

\16\ Section 6001(j).

a. For purposes of the BTOP, how should NTIA, in consultation with the FCC, define the terms ``unserved area" and ``underserved area?"

Accomplished through established and qualifying GSA public/private partnerships and surveys of unserved, underserved and served households and businesses

b. How should the BTOP define ``broadband service? **REAL 3-5MB down/ minimum 1MB up**

(1) Should the BTOP establish threshold transmission speeds for purposes of analyzing whether an area is ``unserved" or ``underserved" and prioritizing grant awards? Should thresholds be rigid or flexible? **YES and speeds should reflect ubiquitous core access speeds throughout the Country.**

(2) Should the BTOP establish different threshold speeds for different technology platforms? **Of course, but core communications and internet access speeds (3.65, 5.8, 4.9, 2.4) should remain consistent.**

(3) What should any such threshold speed(s) be, and how should they be measured and evaluated (e.g., advertised speed, average speed, typical speed, maximum speed)? **TBD**

(4) Should the threshold speeds be symmetrical or asymmetrical? **TBD**

(5) How should the BTOP consider the impacts of the use of shared facilities by service providers and of network congestion? **Roaming agreements between service providers, shared subscriber databases**

c. How should the BTOP define the nondiscrimination and network interconnection obligations that will be contractual conditions of grants awarded under Section 6001? **TBD**

(1) In defining nondiscrimination obligations, what elements of network management techniques to be used by grantees, if any, should be described and permitted as a condition of any grant? **TBD**

(2) Should the network interconnection obligation be based on existing statutory schemes? If not, what should the interconnection obligation be? **TBD**

(3) Should there be different nondiscrimination and network interconnection standards for different technology platforms? **Interconnect standards should remain consistent for each qualifying GSA and Public/Private partnership.**

(4) Should failure to abide by whatever obligations are established result in de-obligation of fund awards? **YES**

(5) In the case of infrastructure paid for in whole or part by grant funds, should the obligations extend beyond the life of the grant and attach for the useable life of the infrastructure? **Profits from core communications and internet access will be managed by the GSA public/private partnership and used to sustain the network.**

d. Are there other terms in this section of the Recovery Act, such as "community anchor institutions," that NTIA should define to ensure the success of the grant program? If so, what are those terms and how should those terms be defined, given the stated purposes of the Recovery Act? **Accomplished through established and qualifying public/private partnerships to include "community anchor institutions" or stakeholders**

e. What role, if any, should retail price play in these definitions? **Pricing should remain as uniform as possible from GSA to GSA but variances may occur based on demographics and topography.**

14. Measuring the Success of the BTOP: The Recovery Act permits NTIA to establish additional reporting and information requirements for any recipient of grant program funds.

a. What measurements can be used to determine whether an individual proposal has successfully complied with the statutory obligations and project timelines? **No such thing as an individual proposal... all done through established and qualifying public/private partnerships.**

b. Should applicants be required to report on a set of common data elements so that the relative success of individual proposals may be measured? If so, what should those elements be? **No such thing as an individual proposal... all done through established and qualifying public/private partnerships.**

15. Please provide comment on any other issues that NTIA should consider in creating BTOP within the confines of the statutory structure established by the Recovery Act. **See all of the above summary...**

RESPONSES TO RUS INITIATIVES / QUESTIONS (Responses in **RED**)

The provisions regarding the RUS Recovery Act broadband grant and loan activities are found in Division A, title I under the heading Rural Utilities Service, Distance Learning, Telemedicine and Broadband

Program of the Recovery Act.\17\

\17\ The text of this authority is as follows:

DISTANCE LEARNING, TELEMEDICINE, AND BROADBAND PROGRAM For an

additional amount for the cost of broadband loans and loan guarantees, as authorized by the Rural Electrification Act of 1936 (7 U.S.C. 901 et seq.) and for grants (including for technical assistance), \$2,500,000,000: Provided, That the cost of direct and guaranteed loans shall be as defined in section 502 of the Congressional Budget Act of 1974: Provided further, That, notwithstanding title VI of the Rural Electrification Act of 1936, this amount is available for grants, loans and loan guarantees for broadband infrastructure in any area of the United States: Provided further, That at least 75 percent of the area to be served by a project receiving funds from such grants, loans or loan guarantees shall be in a rural area without sufficient access to high speed broadband service to facilitate rural economic development, as determined by the Secretary of Agriculture: Provided further, That priority for awarding such funds shall be given to project applications for broadband systems that will deliver end users a choice of more than one service provider: Provided further, That priority for awarding funds made available under this paragraph shall be given to projects that provide service to the highest proportion of rural residents that do not have access to broadband service: Provided further, That priority shall be given for project applications from borrowers or former borrowers under title II of the Rural Electrification Act of 1936 and for project applications that include such borrowers or former borrowers: Provided further, That priority for awarding such funds shall be given to project applications that demonstrate that, if the application is approved, all project elements will be fully funded: Provided further, That priority for awarding such funds shall be given to project applications for activities that can be completed if the requested funds are provided: Provided further, That priority for awarding such funds shall be given to activities that can commence promptly following approval: Provided further, That no area of a project

funded with amounts made available under this paragraph may receive funding to provide broadband service under the Broadband Technology Opportunities Program: Provided further, That the Secretary shall submit a report on planned spending and actual obligations describing the use of these funds not later than 90 days after the date of enactment of this Act, and quarterly thereafter until all funds are obligated, to the Committees on Appropriations of the House of Representatives and the Senate.

1. What are the most effective ways RUS could offer broadband funds to ensure that rural residents that lack access to broadband will receive it? **No more than 80% funded by RUS with 20% funded by Private Sector Investment.**

For a number of years, RUS has struggled to find an effective way to use the Agency's current broadband loan program to provide broadband access to rural residents that lack such access. RUS believes that the authority to provide grants as well as loans will give it the tools necessary to achieve that goal. RUS is looking for suggestions as to the best ways to:

a. Bundle loan and grant funding options to ensure such access is provided in the projects funded under the Recovery Act to areas that could not traditionally afford the investment; **These Rural areas will be 20% funded by Private Sector monies which also will be funding 50% (or TBD %) for Urban and Suburban markets.**

b. Promote leveraging of Recovery Act funding with private investment that ensures project viability and future sustainability; and **(exactly)**

c. Ensure that Recovery Funding is targeted to unserved areas that stand to benefit the most from this funding opportunity.

2. In what ways can RUS and NTIA best align their Recovery Act broadband activities to make the most efficient and effective use of the Recovery Act broadband funds? **Through established and qualifying Public/Private Partnerships**

In the Recovery Act, Congress provided funding and authorities to both RUS and the NTIA to expand the development of broadband throughout the country. Taking into account the authorities and limitations

provided in the Recovery Act, RUS is looking for suggestions as to how both agencies can conduct their Recovery Act broadband activities so as to foster effective broadband development. For instance:

(a) RUS is charged with ensuring that 75 percent of the area is rural and without sufficient access needed for economic development. How should this definition be reconciled with the NTIA definitions of ``unserved" and ``underserved?" **Through established and qualifying Public/Private Partnerships.**

(b) How should the agencies structure their eligibility requirements and other programmatic elements to ensure that applicants that desire to seek funding from both agencies (i) do not receive duplicate resources and (ii) are not hampered in their ability to apply for funds from both agencies? **Through established and qualifying Public/Private Partnerships**

3. How should RUS evaluate whether a particular level of broadband access and service is needed to facilitate economic development? **It is a fact that high speed, ubiquitous broadband communications and internet access bolsters local economies.** ([List](#))

Seventy-five percent of an area to be funded under the Recovery Act must be in an area that USDA determines lacks sufficient ``high speed broadband service to facilitate rural economic development." RUS is seeking suggestions as to the factors it should use to make such determinations. **Through established and qualifying Public/Private Partnerships**

(a) How should RUS define ``rural economic development?" What factors should be considered, in terms of job growth, sustainability, and other economic and socio-economic benefits? **Just consult with Misty Chase (Green County, NC. / NDN Globalization Initiative), Alec Ross (One-Economy Corporation / NDN Globalization Initiative). E.G. In Green County (1100 households) high school graduates increased from 29% to 85% over the past five years, teen pregnancies decreased, due to sustainable Digital Access, Inclusion and Literacy Programs.**

(b) What speeds are needed to facilitate ``economic development?" What does ``high speed broadband service" mean? **TBD... higher than the current definition of "broadband speeds" as defined by the FCC but at least as fast as the highest speeds that Cable or DSL provides.**

(c) What factors should be considered, when creating economic

development incentives, in constructing facilities in areas outside the seventy-five percent area that is rural (i.e., within an area that is less than 25 percent rural)? **Telemedicine, Distance Learning, Employer Outreach, Community Outreach, access to Skills and Training Centers.**

4. In further evaluating projects, RUS must consider the priorities listed below. What value should be assigned to those factors in selecting applications? What additional priorities should be considered by RUS? **Through established and qualifying Public/Private Partnerships**

Priorities have been assigned to projects that will: (1) Give end-users a choice of Internet service providers, (2) serve the highest proportion of rural residents that lack access to broadband service, (3) be projects of current and former RUS borrowers, and (4) be fully funded and ready to start once they receive funding under the Recovery Act.

5. What benchmarks should RUS use to determine the success of its Recovery Act broadband activities? **Reporting through established and qualifying Public/Private Partnerships**

The Recovery Act gives RUS new tools to expand the availability of broadband in rural America. RUS is seeking suggestions regarding how it can measure the effectiveness of its funding programs under the Recovery Act. Factors to consider include, but are not limited to:

- a. Businesses and residences with ``first-time" access.
- b. Critical facilities provided new and/or improved service:
 - i. Educational institutions.
 - ii. Healthcare providers.
 - iii. Public service/safety.
- c. Businesses created or saved.
- d. Job retention and/or creation.
- e. Decline in unemployment rates.
- f. State, local, community support.

Who better to determine the needs and the programs to be funded than the people and businesses that reside in the market to be serviced... thus the need to establish qualifying Public/Private Partnerships.